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ABSTRACT

The technical features and operational status of interactive information systems, i.e. those providing a conversational usage mode to a non-programmer through a data terminal device, are reviewed. The review is designed to aid information specialists in the state-of-the-art assessments preparatory to a detailed system selection procedure. It contains an index: 46 systems are listed by trade name. The index provides information about over 50 technical features. Information is based primarily on documentation received during 1972 and 1973. In addition, there are aids and examples contributing to the intended use of the index.
(Author)



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A Technical Index of Interactive Information Systems

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A Technical Index of Interactive Information Systems

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FOREWORD

Despite a history marked by some significant failures and numerous partial successes, the field of computer software for information services now offers a wide and growing range of choices. Indeed, the variety and complexity of available software seems to overwhelm routine documentation and distribution as an effective means of dissemination. This report offers relief as a concise reference to technical features and operational status in the domain of interactive systems, i.e., those providing a "conversational" usage mode to a "non-programmer" through a data terminal device. The report was prepared under National Science Foundation support for NBS to assess the status of automated information services for scientific and technical information. (Grant NSF-CA68). The principal motivation for this report was a request for assistance from the COSATI Task Group on Interactive Systems, chaired by Mr. Alexander Hoshovsky, U. S. Department of Transportation.

We gratefully acknowledge the excellent cooperation of the system producers, the review assistance of the COSATI Task Group, and especially the support and thoughtful advice of Dr. Edward Weiss and Mr. Richard Lee of the Office of Science Information Service, NSF.

This report identifies computer systems by trade names as necessary to provide a descriptive characterization of their features. This in no case implies a recommendation or endorsement by the National Bureau of Standards, nor should the presentation be construed as a certification that any system provides the indicated capabilities. The information presented was primarily obtained from producer's documents and has been reviewed by each producer for accuracy and clarity, with the authors retaining final technical judgement on the information included. The report is only intended to be informative and instructive in state-of-the-art assessments, and not to be a competitive evaluation of systems for any specific application.

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A TECHNICAL INDEX OF INTERACTIVE INFORMATION SYSTEMS

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Justin C. Walker, Beatrice A. Marron

This report constitutes a reference to technical features and operational status of interactive information systems, i.e. those providing a 'conversational' usage mode to a 'non-programmer' through a data terminal device. It is aimed at the ADP service manager, for his use in the state-of-the-art assessments preparatory to a detailed system selection process. It contains an index that describes 46 systems in terms of a list of over 50 technical features plus descriptive, identification, and background information. In addition, there are aids and examples contributing to the intended use of the index.

Key words: Bibliographic systems; computer programs; computer systems; data base; data management; information retrieval; information services; interactive system; query language; software selection; text processing.

1. INTRODUCTION

This report is written for the purpose of providing Federal ADP customers with information on a certain class of computer systems which are capable of handling scientific and technical information. The report attempts to show what is available and to characterize these systems in such a way as to answer questions which naturally arise prior to selecting such a system for a particular installation. The report is written at a level of technical detail which is aimed at information specialists rather than programming experts. It is intended to be informative and instructive, and not critical or evaluative.

We have reviewed for inclusion in this index over 200 systems which came to our attention from various published and unpublished sources as well as from word-of-mouth. The systems which were selected conform to the following definition: "Information Retrieval" or "Data Management" packages or services which are available to any Federal ADP installation, and which offer an interactive query and search capability that is geared for use by non-programmers. Various reasons for rejecting the systems which did not qualify for inclusion are listed at the end of Section 2 of this report.

The information contained here on each of the systems was obtained primarily from documentation received during 1972 and 1973. In cases where the available documentation did not provide sufficient data, further information was obtained by telephone. We believe that the reporting on these systems is accurate, for it has been reviewed and amended where necessary by the system producers. We regret if this report inadvertently omits any system which may meet the definition. Omissions and out-of-date information are inevitable in a survey of such an extremely active and evolutionary field as this.

A caveat on the use of this index must be mentioned. We have attempted to convey in a limited space information obtained from secondary sources. There are obvious limitations in such a treatment. The best way to gain in-depth familiarity with a system is, of course, to have hands-on experience with it. That has not been possible for most of our treatments, but that course is recommended to readers and users of this inventory.

This report is structured as follows: Section 2 elaborates on the definition of the scope of the survey and clarifies some of the important concepts and sometimes confusing terminology. Section 3 discusses evaluation for system selection, so that a manager can relate his needs to technical features which appear in our questionnaire. Section 4 presents the technical data on systems surveyed. Section 5 presents a brief description of the widely known, commercial data bases that are accessible on some of the surveyed systems. Section 6 presents a bibliography of related work that may also be helpful for information sources.

2. BASIC CHARACTERISTICS OF SYSTEMS UNDER STUDY

In this part, we discuss the rationale for including certain systems in this index and excluding others. The intention has been to include every system for which there are "yes" answers to the following questions:

- (1) Does it have an interactive query and search capability?
- (2) Is this capability geared for use by non-programmers?
- (3) Is the system available to any Federal ADP customer?

We will now explain what is meant by the three questions. The first question is dealt with extensively, since arriving at an acceptable understanding of "interactive" has proved to be quite difficult.

2.1 Interactive Query and Search

The term "interactive system" is elusive when attempts are made to pin down an exact definition. The problem is complicated by the fact that this and related terms have been used for promotional and advertising reasons as much as for technical reasons. Rather than try to establish a hard definition, we sketch the intuitive meaning for the term by placing it in perspective with other terms.

Terms currently in use to describe the processing of jobs by a computer system are batch, remote batch^{*}, on-line, and interactive. Intuitively, batch processing requires that all steps in a job, together with any required input, be specified prior to the job's initiation. A dis-

^{*}"Remote job entry" or "RJE" is often used and is synonymous with "remote batch".

inction can be drawn between local batch and remote batch systems according to input via direct lines or via communication lines. The latter require an extra layer of protocol which sometimes must be specified by the user. A batch program is one in which all parameters are specified in advance, but also whose results are known only after completion of the whole job.

The term "on-line processing" is generally used to describe a spectrum of processing modes. The user communicates with an on-line system via a typewriter-like terminal (i.e., a terminal with a keyboard and possibly a display). The system actively acknowledges user input in some form, as opposed to the more passive remote batch systems. The spectrum of processing modes is determined by the extent of this acknowledgement, e.g. prompting after receipt of "input lines", prompting plus syntax check of control cards, and so on. Interactive systems form a portion of the on-line spectrum. They are characterized by "friendly" responses to input errors, relatively rapid response to system commands and the like. Generally, the interactive system links a system or user program directly with the user at all times, in contradistinction to other on-line systems. In the latter type, user and systems programs utilize the terminal mainly as a line printer.

The above distinctions are not rigorous, and from the user's view may be non-existent in a fast-response environment. The following discussion tries to focus on the "interactive" system from the user's point of view. In the survey we include systems from the entire on-line spectrum but we have attempted to restrict inclusion to those which present some indication of interactivity either from the above consideration or from those following.

Imagine a system which allows a user to formulate a query at his terminal and submit that query for searching against a file, and which prints out the records which satisfy that query, within a matter of seconds. Such a system qualifies as having an "interactive query and search capability", although it is at the weaker end of the spectrum compared to a system as now described.

This system allows the user to incrementally formulate a query, and responds with intermediate results (e.g. the number of records satisfying the query or similar terms or phrases which the user may also consider), based on which the user can re-formulate or extend his query. This cycle of system response with intermediate results leading to user re-formulation of query, etc. need have no upper limit. For example, the following user/system session is typical of one of the major applications of interactive systems, namely bibliographic search.

The user enters his query, e.g. "computers", which is checked for inclusion in an index of permitted terms. It is found to be included and found to be a descriptor of say 1,104 documents in the system. The system responds with "1,104 hits". At this point the user modifies his original request with "and the United States". The system responds with "52 hits". The user then modifies his now complex query with

"published since 1971". The system responds with "6 hits". The user requests the titles of these documents. On viewing them he then requests the full citations of three documents from that six that he really is interested in. Such a system would be at the stronger end of the "interactive" spectrum.

2.2 Use by Non-programmers

Many customers want the capability of having a user who is not a programmer formulate queries at a terminal in a way that is relatively natural for him. Many systems are designed in such a way that their interactive query and search components are geared for use by non-programmers: information specialists, managers, or clerical personnel. We have attempted to restrict our survey to such systems.

In some cases, the documentation for a system states that it is for use by programmers. All such systems have been rejected. In some cases not so rejected, inspection of a system's documentation forces us to reject it because there are requirements on the user to "do programming" of a sort. By this we mean that the user has to phrase some or all of his query (or operations preceding the query) in language constructs which are primitive and unnatural in relation to his task of query and search.

For example, one system defines its files in terms of physical storage structure. In querying files, the affected files must be described by such parameters as transport number, number of logical records per physical record, and address of first block (of tape) or sector (of disc).

Another system has essentially a high level programming language for querying files. Each query is bracketed by a BEGIN-END pair and language statements within are numbered hierarchically. Each statement potentially produces a result which can be referred to in other statements by giving the statement number. An example is:

```
BEGIN
1. FIND ALL RECORDS FOR WHICH GRADE = 2
2. COUNT RECORDS IN 1
3. PRINT ... COUNT IN 2
END
```

The primitive nature of the statements forces the user to construct a program to query the system, even for the most logically simple requests.

2.3 Availability

We are including in this index systems which are available to the Federal customer. Availability implies that the system is operational

(not in research or development) and still supported. There is also an understanding that there are no legal, security, or other problems in the way of availability. The systems included here are either available on a commercial basis or on a less formal and less costly basis in cases where the originator is not a commercial establishment. Further, we have included both those systems which are available on a service basis and those which are available as packages for lease or purchase.

To summarize, we have attempted to include every data management or information retrieval system for which there are "yes" answers to the three questions. Reasons for not including a system are: (1) it is a batch system; (2) its query language is not for use by non-programmers, (3) it (or its query language) is in research or development; (4) it is no longer supported; (5) the originator of the system is unlocatable or no longer in business; (6) there are legal or security problems in the way of releasing the system; and (7) documentation has been solicited but not yet received.

3. SYSTEM FEATURES AND EVALUATION REQUIREMENTS

3.1 Questionnaire with Explanatory Notes

Systems are built with different objectives and hence have different capabilities for different application situations. Since not all systems provide the same set of features to the same degree, it has been necessary here to establish features for describing systems relative to a broad range of possible user needs. The feature list or questionnaire used in this index is therefore the union of a wide number of possibly relevant capabilities, see Table 1. A specific system is characterized by a subset of the features covered.

3.2 Suggested Procedure for Use

The survey results, Section 4, represent a nearly complete inventory of available interactive software, and therefore are a basis for assessing the state-of-the-art in this field. The index is intended also to be informative in the preliminary, exploratory stage of a system selection activity. In this area, the index may aid a manager in articulating his requirements using the offered features as a starting point. Further, the index may be useful in forming a tentative set of candidate systems, by screening the inventory against a required subset of features. The latter of course imposes an inescapable burden on the user to relate his unique needs to applicable features.

The suggested procedure for using this index can be illustrated by briefly discussing questions arising in formulating requirements and evaluating information systems. Two basic alternatives would face an information service manager once he has decided to investigate the feasibility of automated service, see Figure 1. If the expected usage is very high and a computer facility is in place, an in-house service could be considered. Compatibility with the available mainframe may

TABLE 1. QUESTIONNAIRE WITH EXPLANATORY NOTES

A. GENERAL DESCRIPTION	Additional names are given for alternative versions. System originator is developer and implementor.
1. SYSTEM NAME	
ORIGINATOR TELEPHONE	
2. SOFTWARE AVAILABILITY	Filled in if the computer program package itself is offered for customer installation.
a. FOR PURCHASE AT WHAT COST	
b. FOR LEASE AT WHAT COST	
3. SERVICE AVAILABILITY	Filled in if remote service is offered.
a. SEARCH SERVICE AT WHAT COST	
b. DATA BASES	
c. TAKES CUSTOMER DATA BASES	
4. HISTORY OF SOFTWARE	Filled in where the package itself is offered.
a. FIRST INSTALLATION	
b. SIGNIFICANT INSTALLATIONS	
5. HISTORY OF SERVICE	Filled in where service is offered.
a. SERVICE INITIATION	
b. PRESENT USAGE	
B. COMPUTER ENVIRONMENT	
1. "MAIN FRAME"	
2. OPERATING SYSTEM	
3. SOURCE LANGUAGE	Used to implement the software.
4. TERMINAL TYPES	
5. TRANSMISSION RATES	
6. RE-ENTRANT FOR MULTIPLE USERS	Identifies systems which can serve multiple users simultaneously through re-entrant code, thus conserving storage.
C. FILE DEFINITION	Can the remote user define and implement his own data and file structures?
1. USER DEFINABLE	
2. VARIABLE LENGTH TEXT	Do individual records accommodate text of any length, or at least as much as a typical bibliographic abstract?
3. TRUNCATED FIELDS	Is it possible to have a variable number of identically named fields in a record, e.g., keywords or authors?
D. FILE "MAINTENANCE"	
1. ALLOWS ON-LINE:	
a. CREATION	
b. UPDATE	"On-line updating" refers to change of the logical content of a record, while "on-line editing" refers to an associated capability to selectively indicate partial changes of the record content.
c. DELETION	
d. EDITING	
2. PREPROGRAMMED DATA VALIDATION CHECKS	Are there functions to check the "correctness" of the incoming data?
3. OPTIONAL ORDERING OF ENTERED DATA	Can incoming data elements and records be optionally ordered with respect to pre-existing elements and records in the file?
4. AUTOMATIC OF "MACHINE-AIDED" CONTENT INDEXING	Is there a preprogrammed automatic or machine-aided process to scan raw text and develop concept-indicating keywords and phrases?

TABLE 1., CONTINUED

E. QUERY

1. USER-SYSTEM INTERACTION

a. MULTIPLE OPTIONS
AT ANY POINT

During a session with the system, does the user have the freedom to specify various actions at any time? For example, after entering a search term, is the user returned to a state where he may choose more terms, review previous choices, or execute the search?

b. ENGLISH-LINE PHRASING

Do the system commands have English or near-English names indicating their function?

c. SYSTEM-FORCED DIALOGUE

Is the user completely "led along" by the system in a dialog completely controlled by the system?

2. CONTENT SEARCHING

a. CONTROLLED VOCABULARY

Is the user required to use a pre-established set of search terms?

b. FULL TEXT INVERSION

Can the user use any word expected in text (excepting perhaps an excluded list of stop words like "a", "of", "the")?

c. STEMMING PERMITTED

Can the user specify a set of search terms by using a root expression such as "comput", where "s" has all the values "e", "er", "ers", etc.

d. SYNONYMS

Does the system have the capability of specifying a class of semantically equivalent terms either in its vocabulary or else by definition?

e. DISPLAY OF

RELATED TERMS

Can the system display terms from its vocabulary which are equivalent to a given term or are more or less specific, but related to it?

f. CHECKING TERM IN CONTROLLED VOCABULARY

Is there a command which checks a given input term for inclusion in a controlled vocabulary and perhaps gives immediate alphabetic neighbors?

3. SEARCH SPECIFICATION

a. "CUT NAME FIELDS

Is it necessary to always specify fields in query formulation, e.g., "Author=Freed"?

b. "MAX LIMIT FIELDS

Is it possible to specify fields in query formulation to limit or control the search? Is there an explicit capability for taking two valid search expressions and connecting them with AND or OR so as to construct a new expression with the usual Boolean interpretation?

d. BOOLEAN OR

e. BOOLEAN NOT

Is there an explicit capability for negating a valid search expression by preceding it with NOT?

f. NESTING OF BOOLEAN EXPRESSIONS

Is there an explicit capability for embedding search expressions within other search expressions?

g. PHRASE AND DISTANCE SEARCHING

Is it possible to use multi-word strings as search terms? Is it possible to use a query which specifies that two terms must occur within some stated distance in the text from each other?

h. NATURAL ENGLISH

Can the user phrase his search objective in natural English sentences and phrases?

i. RANGE SEARCHING

Is there a capability for specifying a range of numeric values in a search expression, e.g., "...published since 1970"?

4. TUTORIAL FEATURES

a. "HELP" COMMAND

Is there a command which gives assistance to a user on what options are available to him at various points in a session?

b. DOCUMENTATION ON-LINE

Can the user get at documentation on-line which explains the system, the data bases, etc.?

TABLE 1., CONTINUED

5. SEARCH STRATEGY	Referring to the file accessing technique used in the implementation, is an individual record uniquely located: a. from an index, b. by consecutive search of each record in the file, c. within a group of records?
a. RANDOM b. SEQUENTIAL c. INDEXED SEQUENTIAL	
F. REPORT GENERATION	
1. LANGUAGE TYPE	How are alternative output formats determined?
a. STANDARD OUTPUT b. SELECT A-M-C c. OWN CODE	
2. MEDIA FLEXIBILITY	Can the user write a program to specify his output format?
a. OFF-LINE PRINTING b. DISPLAY OF GRAPHS c. SPECIAL OUTPUTS	
3. SPECIAL CAPABILITIES	Do programs exist to display simple charts and graphs? Are there special output forms (e.g., microfilm, etc.) available?
a. SORTING b. SEQUENCING c. COUNTING d. ARITHMETIC	
G. SECURITY PROTECTION	Can output be selectively sorted on chosen fields? Refers to a capability for sorting or "ranking" by relevance to a query. On field values.
1. TERMINAL	
2. DATA BASE 3. RECORD 4. FIELD	Refers to the use of passwords or other identifiers to inhibit use of a terminal or access to data elements by non-qualified users.

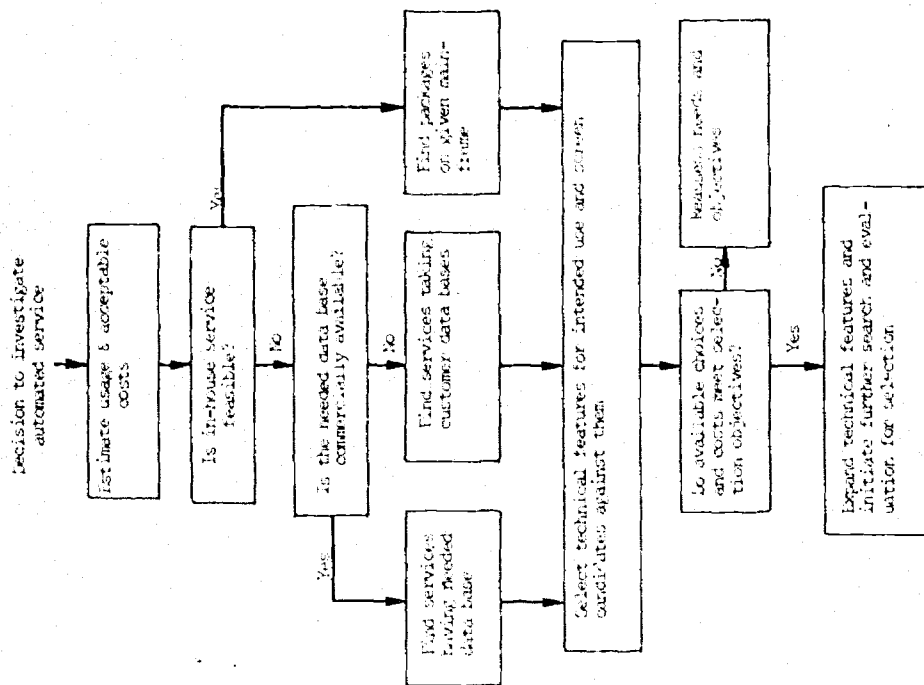


Figure 1. Flow Chart of a Suggested Usage Procedure

then be the overriding factor in the selection of a software package to be installed. The index can be used to find as prime candidates the systems implemented on the given vendor hardware. However, if expected usage is low, say on the order of a few hours of terminal use per day, or if a computer center and necessary expertise are unavailable, a worthy alternative would be to obtain use of software as a service from an outside computing center. A pertinent question then is whether the service offers searching of a major commercial data base, if required, or takes customer data bases if a special private file is involved. The index also assists in finding initial candidates based on these factors.

Having pursued one of the above alternatives to identify a relevant subset of available systems, attention should turn to technical features desirable or necessary for the intended application. The questions in the index were purposely selected to draw out distinctions in three broad classes of system application, called respectively formatted data processing, structured text searching, and personal text handling. As a tutorial guide for the index user to articulate his unique requirements, these classes will be individually discussed toward framing a representative list of essential and additional desirable features (Tables 2-4).

Formatted data processing is conceived as most typical of management information, military command/control, and other applications where data elements have mostly numerical, abbreviated text, or other encoded (e.g. date) values. Personnel, inventory, or production control files would be common examples. Data values in the file may need to be updated frequently as status changes occur in the application environment (e.g. personnel are reassigned, parts are used, or products moved from one manufacturing station to another). This is motivation for requiring on-line file maintenance as an essential capability. In Table 2, therefore, D. 1 indicates that a qualifying system must allow update or editing transactions to be entered from the user's remote terminal (see Table 1 for explanation of items under D.1). Formatted data processing software must provide considerable flexibility to the user in manipulating file data in any logically correct order and with a wide range of arithmetic functions. These are essential because such systems are usually applied concurrently to a number of differently organized files. Also, they must help their user to answer an indeterminable variety of questions about relationships and quantities in the file data. In Table 2, the conclusion is reflected in choices of: an interaction language with multiple options (E.1.a), a full Boolean capability to express logical or comparison conditions (E.3.c through E.3.f), and arithmetic capabilities (F.3.c and d). Users of these systems also require a range of options in formatting output reports, so that essential factors can be made clearly visible and effectively ordered with respect to related data. For these reasons, optional formatting (F.1.b and c) and ordering (F.3.a) are included as essential in Table 2.

Related to these essential features are several additional ones that seem especially desirable and are often available. In some circumstances they may be considered essential. Repeatable fields (C.3)

are a great convenience in organizing and referencing the machine file when records have multiple occurrences of the same type of data (e.g. children or work experience in a personnel file). This may also save considerable machine storage for many files. English-like language phrasing (E.1.b) aids user comprehension and ease of use, in conjunction with the multiple option language characteristic. Range searching (E.3.i) and displays of graphs (F.2.b) significantly enhance selection of desired records and data presentation in a more readily perceived form. Tutorial aids (E.4.a or b) are highly desirable, even essential, to bring users quickly toward effective use of complex software or to help solve usage problems as they are encountered.

Structured text searching (Table 3) is conceived as representative of bibliographic information searching, legal text searching, and similar uses where the file records consist of prescribed segments of text, individually of variable length (C.2 in Table 1), possibly rather long (1000 characters or more). Examples of text segments would be report titles, abstracts, patent claims, paragraphs, statute sections. To identify a text record for selection there must be a technique for abbreviated content description, since requiring an exact match to all the text in a segment would be inconceivable and inconsistent with the intended function. Content description may be provided by indexing each file record by a set of keywords from a controlled vocabulary (E.2.a) which the user can inspect to check his desired term for acceptability (E.2.f). Or else, any significant word occurring in text may be provided as a valid search term (E.2.b). Because these systems are especially aimed at users unaccustomed to programming encoded forms, English-like phrasing is deemed essential as well. Because a search may select voluminous text records that would be exceedingly long to print on the usual 10 or 30 character/second terminals, off-line printing (F.2.a) at high speed is also essential. Moreover, these systems should present a count (F.3.c) of the records that would be selected by a proposed search so that a user can judge the desirability of continuing the search.

The data files of structured text searching systems would be expected to be unchanging in content and very large in volume. It would be expensive to reorder or restructure them as new data is received, so it would be desirable for the system to accept new data in any order (D.3). Other desirable features would extend content searching capability, for example by giving a synonym facility (E.2.d) or a presentation of other terms that are conceptually related (E.2.e). As in formatted data processing, tutorial aid is desirable. In contrast to that application however, full Boolean capability, optional report formatting, and optional ordering are suggested here as desirable rather than essential. Only a Boolean AND, allowing the conjunction of distinct search terms, is imperative for user convenience, to avoid a tedious selection from record subsets found by individual terms. Optional formatting and ordering may not be used often for such simple structured output records as bibliographic citations. A standard output presentation then is generally sufficient, unless text fields become numerous and frequently of marginal importance, requiring more selectivity to be given the user.

Personal text handling is conceived as a generalization of structured text searching to uniquely serve an individual researcher in creation, editing, and composition of text bodies as well as searching them. Examples arise in military intelligence work, legal case preparations, source book or encyclopedia preparation, etc. Most of the requirements of structured text searching apply. The most germane additions are for user definable file structures (C.1) and on-line file maintenance (D.1), which allow complete user flexibility to establish arbitrary new files in the course of his interactive usage. Optional output formatting becomes essential because of the potential variety and scope of file structures. A highly desirable search capability would be phrase and distance searching (E.3.g), to permit the researcher to more narrowly select desired records based on occurrence of phrases or words in context (separated by limited distance). As the researcher may establish many records with grossly similar content within his special interest, this additional selectivity has great importance.

The above rationale indicates the type of analysis which may lead the user to a pertinent feature list for his situation.

Table 5 illustrates using the worksheet for structured text searching to develop comparative presentations of system capabilities. These are the basic questions which the index user may answer in such fashion: are there systems offering the essential combination of features? is there a good number of desirable systems, portending a competitive choice in cost, types of vendor support, proven system reliability, etc.? is the cost range of desirable systems within the funds available for a purchase or subscription? Positive answers should build confidence that an economical, proven system can be obtained, while negative answers may indicate a presently infeasible set of requirements or a constrained area where further research and system development is advisable.

It is suggested that each index user develop his own worksheet of features for his needs. Table 1 shows that the index permits a sharper delineation of required features than used in Tables 2 to 5. It is expected also that individual readers will perceive special features for their need that are not used here, and will have to be specially investigated for all systems of interest. The index is meant to help draw attention to that subset of systems of greatest interest and relevance.

The index is primarily meant however to aid state-of-the-art assessments. We see in the index results many disparities calling attention to needed research, and also many common factors indicating a readily available, recognized feature. Regarding the former, we note particularly that only half of the systems have tutorial capability - yet none are considered trivial to use. The design of effective training aids and problem diagnosis features is a very important area for further development. On the other hand, almost all systems offer English-like phrasing in their language style. This is encouraging for it is clearly desirable and of little added cost to implement in terms of meaningful command names.

Table 2. Illustrative Worksheet for Formatted
data processing Application

CHARGE NUMBER	VALUE			
	1	2	3	4
System Name (A.1) Originator Offers required data base (A.2.b) Takes customer data base (A.3.a) Cost (A.2 or A.3.a)				
TECHNICAL FEATURES				
[essential]	on-line file maintenance (L.1) Multiple option interaction (L.2.a) Full Boolean capability (L.3.a-e) Optional report format (F.1.b-e) Optional output order (F.3.a) Arithmetic (F.3.c-d)			
	Repeatable fields (C.3) English-like phrasing (L.1.b) Range searching (L.3.f) Tutorial aid (E.4.a-b) Display of graphs (F.2.b)			
Desirable				

Table 3. Illustrative Worksheet for Structured Text Search
Application

CHARGE NUMBER	VALUE			
	1	2	3	4
System Name (A.1) Originator Offers required data base (A.2.b) Takes customer data base (A.3.a) Cost (A.2 or A.3.a)				
TECHNICAL FEATURES				
[essential]	Variable length text (L.1) English-like language (L.1.b) Content description (L.2.a and L.2.b) or other L.1.b) Off-line printing (F.2.a) Counting of hits (F.3.c)			
	Optional ordering of data (L.3) Content searching aids (L.1.c-e, L.2.b, L.3.d) Full Boolean capability (L.3.c-f) Tutorial aid (E.4.a-b) Optional report format (F.1.b-e) Optional output order (F.3.a-b)			
Desirable				

Table 4. Illustrative Worksheet for Personal Text Handling Application

GENERAL FACTORS	SYSTEM			
	1	2	3	4
System Name (A.1) Originator Offers required data base (A.3.b) Takes customer data base (A.3.c) Cost (A.2 or A.3.a)				
TECHNICAL FEATURES				
Essential	User defined files (C.1) Variable length text (C.2) On-line file maintenance (E.1) Multiple option interaction (F.1.a) English-like language (E.1.b or E.3.b) Content description (E.2.a and E.2.f or else E.1.b)			
	Optional report format (F.1.b-c) Off-line printing (F.2.a)			
Desirable	Optional ordering of data (E.3) Content searching aids (E.2.c-e, E.3.2)			

Table 5. Illustrative Worksheet for Structured Text Searching, Compiled for Representative Systems

GENERAL FACTORS	SYSTEM			
	1	2	3	4
System Name (A.1) Originator Offers required data base (A.3.b) Takes customer data base (A.3.c) Cost (A.2 or A.3.a)	NAME	ADDRESS- PHONE	SYSTEM CONTROL	UNIT ID
TECHNICAL FEATURES				
Essential	Variable length text (C.2) English like language (E.1.b or E.3.b) Content description (E.2.a and E.2.f or else E.1.b) Off-line printing (F.2.a) Counting of hits (F.3.c)	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes	Yes Yes Yes (user supplied) Yes Yes
	Optional ordering of data (E.3) Content searching aids (E.2.c-e, E.3.2, E.3.1) Full Boolean capability (E.3.c-4) Tutorial aid (E.4.a-b) Optional report format (F.1.b-c) Optional output order (F.3.a-b)	Yes Yes Yes Yes Yes Yes	Yes Yes No Yes Yes Yes	No Yes Yes Little Yes Yes Yes

Section 4 presents several matrices that illustrate how the features may be used individually and in combination to categorize systems as may be relevant to user needs. It is advisable however for a user to create his own worksheet of pertinent features and draw information from the survey, e.g. Table 5, to judge the capabilities that are available in the field.

It is neither intended or recommended that the survey results or the broad feature list should be adopted as the exclusive basis of a system selection. A competitive selection decision requires a much more detailed matching of user requirements with functional features, coupled with a productivity assessment addressing performance and cost factors. The background for this task necessarily involves familiarity with a user's organization and its forcing constraints, such as the needed data files and their characteristics, funds available, allowable implementation time, present computer equipment, and available programming skills. The tools to be employed in system evaluation include benchmark exercises, performance monitoring, simulation and modeling, hands-on experience, detailed documentation review, and thorough audit tests. Inasmuch as this survey has been based primarily on documentation review, it cannot be evaluative of one system against another. Managers facing a selection decision are advised then to acquire system documentation, at least to the level of a complete user's manual, and to undertake hands-on familiarization or benchmark exercises to thoroughly understand each system's capability for his user community and procurement constraints.

4. SURVEY RESULTS

4.1 Indexes To Systems

As an aid to the reader, this section presents several examples of classification of information systems drawn from the questionnaires. Following is a brief description of each of the four illustrative classifications.

Applications:

As examples of application classes, there are three types considered: formatted data, structured text and personal text. The relevant features have been described in Section 3.2. Table 6 presents a matrix for this categorization. This may help the reader direct his first attention to systems closely corresponding to an intended usage.

Main Frames:

The matrix of Table 6 dealing with mainframes correlates the systems in the survey with the (classes of) main frames on which each runs. The classification "other" is used for those main frames for which only one of the systems is available. For these systems, reference to the specific questionnaire will give the appropriate main frame (B.1).

L. Applications

2. Main Trans Series

3. Type of Offering

4. Ownership

[illegible]

Type of Offering:

Questions A.2, 3 deal with the availability of a system and in particular answer whether the system is available as a software vendor's package to be installed at the user's site, or as a service running at the vendor's site.

Ownership:

Two categories are used to describe ownership of a system. The term "public" designates those systems in which the originator (or vendor) has not retained a substantial monetary interest, such as those which have been completely government funded. These systems are generally available (source and source listings) for a nominal fee, such as tape duplication. In some cases, the producer or vendor may only consider assistance for a fee, covering installation, modifications, and possibly maintenance. This assistance may be contractual and include on-site personnel in the case of packages, or resource costs, in the case of services.

The "proprietary" systems are those that are wholly owned by private concerns. Generally there is a purchase price on the system. However in the case of some main frame manufacturers, the system may be available without additional cost to the purchasers or lessors of their equipment.

4.2 The Inventory of Systems

<u>Name</u>	<u>Page</u>
BASIS	18
CDMS	19
CIRCOL	20
(Data/Central).	21
DIALOG	22
DMARS	23
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EMISARI	27
ENFORM	28
FLEXIMIS	29
GIM	30
GIPSY	31
IMARS	32
IMS(OEP)	33
IMS/360	34
IMS/8	35
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LEADERMART	38
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SHOEBOX	57
SOLAR	58
SPIRES II	59
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TICON	62
UNIDATA	63

A. GENERAL DESCRIPTION

1. SYSTEM NAME

BASIS (Battelle Automated Search Information System)
Battelle Memorial Institute
505 King Ave.
Columbus, Ohio 43201
614-299-3151

2. SOFTWARE AVAILABILITY

a. FOR PURCHASE
Approx. \$30,000
Yes,
\$1,500/mo.
b. FOR LEASE
AT WHAT COST
c. AT WHAT COST

3. SERVICE AVAILABILITY

a. SEARCH SERVICE
Battelle can develop a file and provide search service for it. Service also available through membership in Science Information Association (SIA).
File implementation cost + on-line search cost (\$9.50-0.75/min.)
ANIC, MCIC, Copper Data, DOT-TRIS, HTIS (3 yrs.), Chemical Condensates (3 yrs.), DOD Cost Data, and 26 others.
Yes
b. DATA BASES
c. TAKES CUSTOMER DATA BASES
Yes

4. HISTORY OF SOFTWARE

a. FIRST INSTALLATION
July, 1970
b. SIGNIFICANT INSTALLATIONS
Battelle, National Security Agency

5. HISTORY OF SERVICE

a. SERVICE INITIATION
July, 1970
b. PRESENT USAGE
Over 900 users, most at Battelle's Information Centers. Government users include EPA, DOT, DOD.

B. COMPUTER ENVIRONMENT

1. MAIN FRAME

CDC 6400, UNIVAC 1108

2. OPERATING SYSTEM

CDC SCOPE 3.2, 3.3, 3.4

3. SOURCE LANGUAGE

UNIVAC EXEC-8
93% FORTRAN, 5% Assembler

4. TERMINAL TYPES

TTY compatible, CDC 200 series terminals

5. TRANSMISSION RATES

110, 150, 300, 2400, 4800 baud

6. RE-ENTRANT FOR MULTIPLE USERS

Yes

C. FILE DEFINITION

1. USER DEFINABLE

Yes

2. VARIABLE LENGTH TEXT

Yes

3. REPEATED FIELDS

Yes

D. FILE MAINTENANCE

1. ALLOWS ON-LINE

Yes

a. CREATION

Yes

b. UPDATE

Yes

c. DELETION

Yes

d. EDITING

Yes

2. PREPROGRAMMED DATA VALIDATION CHECKS

Yes

3. OPTIONAL ORDERING OF ENTERED DATA

Yes

4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING

Yes

E. QUERY

1. USER-SYSTEM INTERACTION

a. MULTIPLE OPTIONS AT ANY POINT
Yes, prompting plus command

b. ENGLISH-LIKE PHRASING

Yes

c. SYSTEM-FORCED DIALOGUE

No

2. CONTENT SEARCHING

Yes

a. CONTROLLED VOCABULARY

Yes

b. FULL TEXT INTERVIEW

Yes

c. STEERING PERMITTED

Yes

d. SYNONYMS

Yes

e. DISPLAY OF RELATED TERMS

Yes

f. CHECKING TERM IN CONTROLLED VOCABULARY

Yes

3. SEARCH SPECIFICATION

a. MUST NAME FIELDS
Yes
b. MAY LIMIT FIELDS
Yes
c. BOOLEAN AND
Yes
d. BOOLEAN OR
Yes
e. BOOLEAN NOT
Yes
f. NESTING OF BOOLEAN EXPRESSIONS
Yes
g. PHRASE AND DISTANCE SEARCHING
No
h. NATURAL ENGLISH
No
i. PARSE SEARCHING
Yes

4. TUTORIAL FEATURES

a. "HELP" COMMAND
No, being developed.
b. DOCUMENTATION ON-LINE
Yes

5. SEARCH STRATEGY

a. RANDOM
Yes
b. SEQUENTIAL
No
c. INDEXED SEQUENTIAL
No

7. REPORT GENERATION

1. LANGUAGE TYPE

a. STANDARD OUTPUT
Yes
b. SELECT AMONG OPTIONS
Yes
c. OWN CODE
Yes

2. MEDIA FLEXIBILITY

a. OFF-LINE PRINTING
Yes
b. DISPLAY OF GRAPHS
Yes
c. SPECIAL OUTPUTS
Plotting on microfilm

3. SPECIAL CAPABILITIES

a. SORTING
Yes
b. SEQUENCING
No
c. COUNTING
Yes
d. ARITHMETIC
Yes

C. SECURITY PROTECTION

1. TERMINAL
No
2. DATA BASE
Yes
3. RECORD
Yes
4. FIELD
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
CDMS
System Development Corp.
2500 Colorado Ave.
Santa Monica, Calif. 90406
213-393-9411
TELEPHONE

2. SOFTWARE AVAILABILITY
Available from COSMIC (Computer
Software Management and
Information Center of the
University of Georgia)

- a. FOR PURCHASE
b. AT WHAT COST
c. FOR LEASE
d. AT WHAT COST

3. SERVICE AVAILABILITY

- a. SEARCH SERVICE
Software service available
(including on ARPA network)
\$2,100 per month minimum
None public
Yes
- b. DATA BASES
- c. TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE

- a. FIRST INSTALLATION
TDM'S (predecessor of CDMS)
installed in May 1968
- b. SIGNIFICANT
INSTALLATIONS
National Military Command
System Support Center, and CIA
Washington, D.C.

5. HISTORY OF SERVICE

- a. SERVICE INITIATION
July 1969
- b. PRESENT USAGE
2 accounts in Washington area
(ARPA network), usage unknown

B. COMPUTER ENVIRONMENT

1. MAIN FRAME
IBM 360/50, IBM 370/145 and up
2. OPERATING SYSTEM
SDC's TS/EXEC, IBM OS/VS1
3. SOURCE LANGUAGE
JOVIAL
4. TERMINAL TYPES
IBM 2741, TTY models 33, 35
5. TRANSMISSION RATES
10, 15, 30 cps
6. RE-ENTRANT FOR
MULTIPLE USERS
No

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
No, 255 char. max.
3. REPEATED FIELDS
Yes

D. FILE MAINTENANCE

1. ALLOWS ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING
Yes
Yes
Yes
Yes

2. PREPROGRAMMED DATA
VALIDATION CHECKS

Yes

3. OPTIONAL ORDERING OF
ENTERED DATA

Yes

4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING

No

E. QUERY

1. USER-SYSTEM INTERACTION

- a. MULTIPLE OPTIONS
AT ANY POINT
Yes
- b. ENGLISH-LINE
PHRASING
Yes
- c. SYSTEM-FORCED
DIALOGUE
No

2. CONTENT SEARCHING

- a. CONTROLLED VOCABULARY
Yes, if user defined
- b. FULL TEXT INVERSION
Yes, on user
designated fields
- c. STOPPING PERMITTED
No
- d. SYNCHRONIZING
No
- e. DISPLAY OF
RELATED TERMS
No
- f. CHECKING TERM IN CON-
TROLLED VOCABULARY
Yes

A. GENERAL DESCRIPTION

1. SYSTEM NAME
CIRCOL - Foreign Technology Division
Air Force Systems Command
Wright-Patterson Air Force
Base, Ohio 45433
513-257-2603

TELEPHONE

2. SOFTWARE AVAILABILITY

a. FOR PURCHASE
AT WHAT COST
b. FOR LEASE
AT WHAT COST

3. SERVICE AVAILABILITY

a. SEARCH SERVICE
By arrangement.
b. DATA BASES
Foreign scientific and
technical documents.

c. TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE

a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS

5. HISTORY OF SERVICE

a. SERVICE INITIATION
Early 1969
b. PRESENT USAGE
40 agency users.

B. COMPUTER ENVIRONMENT

CIRCOL is built on IBM's
Document Processing System.

1. MAIN FRAME

IBM 360/65

2. OPERATING SYSTEM

OS 360/MVT

3. SOURCE LANGUAGE

Assembler Language

4. TERMINAL TYPES

IBM 2741, TTY models 33, 35

5. TRANSMISSION RATES

10, 15 cps

6. PL-ENTRANT FOR

MULTIPLE USERS

C. FILE DEFINITION

1. USER DEFINABLE

No

2. VARIABLE LENGTH TEXT

Yes

3. REPEATED FIELDS

Yes

D. FILE 'MAINTENANCE'

1. ALLOWS ON-LINE

No

a. CREATION

No

b. UPDATE

No

c. DELETION

No

d. EDITING

No

2. PREPROGRAMMED DATA

Yes

VALIDATION CHECKS

Yes

3. OPTIONAL ORDERING OF

No

ENTERED DATA

No

4. AUTOMATIC OR

Yes

'MACHINE-AIDED

CONTENT INDEXING

Yes

E. QUERY

1. USER-SYSTEM INTERACTION

Yes

a. MULTIPLE OPTIONS

Yes

b. AT ANY POINT

Yes

c. ENGLISH-LINE

Yes

d. PHRASING

Yes

e. SYSTEM-FORCED

No

f. DIALOGUE

No

2. CONTENT SEARCHING

No

a. CONTROLLED VOCABULARY

Yes

b. FULL TEXT INVERSION

Yes

c. STOPPING PERMITTED

Yes

d. STOPPING

No

e. DISPLAY OF

No

f. CHECKING TERM IN CON-

Yes

trolled VOCABULARY

Yes

3. SEARCH SPECIFICATION

No

a. MUST NAME FIELDS

Yes

b. MAY LIMIT FIELDS

Yes

c. BOOLEAN AND

Yes

d. BOOLEAN OR

Yes

e. BOOLEAN NOT

Yes

f. NESTING OF BOOLEAN

Yes

g. EXPRESSIONS

Yes

h. PHRASE AND DISTANCE

Yes

i. SEARCHING

No

j. NATURAL ENGLISH

Yes

k. RANGE SEARCHING

Yes

4. TUTORIAL FEATURES

No

a. "HELP" COMMAND

No

b. DOCUMENTATION

Yes, partial

c. ON-LINE

Yes, partial

5. SEARCH STRATEGY

No

a. "RANDOM"

No

b. SEQUENTIAL

No

c. INDEXED SEQUENTIAL

Yes

F. REPORT GENERATION

Yes

1. LANGUAGE TYPE

Yes

a. STANDARD OUTPUT

Yes

b. SELECT AMONG

Yes

c. OWN CODE

No

2. MEDIA FLEXIBILITY

Yes

a. OFF-LINE PRINTING

No

b. DISPLAY OF GRAPHS

No

c. SPECIAL OUTPUTS

No

3. SPECIAL CAPABILITIES

Yes

a. SORTING

No

b. SEARCHING

Yes

c. COUNTING

Yes

d. ARITHMETIC

Yes

G. SECURITY PROTECTION

Yes

1. TERMINAL

No

2. DATA BASE

No

3. RECORD

No

4. FIELD

No

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR (Data/Central)
Head Technology Laboratories
Research Park Dayton, Ohio 45432
TELEPHONE (513) 428-3111

2. SOFTWARE AVAILABILITY
a. FOR PURCHASE No
AT WHAT COST
b. FOR LEASE Yes
AT WHAT COST \$1500 a month for DOS, \$1800 a month for OS

3. SERVICE AVAILABILITY
a. SEARCH SERVICE Yes
AT WHAT COST \$5,000 a month
b. DATA BASES American Psychology Abstracts, data base of statutory and decisional law in the state of Ohio, and many others.

c. TAKES CUSTOMER DATA BASES Yes

4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION 1968
b. SIGNIFICANT INSTALLATIONS Wright-Patterson Air Force Base, Union Carbide

5. HISTORY OF SERVICE
a. SERVICE INITIATION 1969
b. PRESENT USAGE 10 organizational users

6. COMPUTER ENVIRONMENT

1. MAIN FRAME IBM 360/40 and up

2. OPERATING SYSTEM DOS or OS

3. SOURCE LANGUAGE Assembly, COBOL, FORTRAN

4. TERMINAL TYPES CRT, TTY, all IBM hard copy

5. TRANSMISSION RATES 10, 30, 120 cps

6. RE-ENTRANT FOR MULTIPLE USERS Yes

C. FILE DEFINITION

1. USER DEFINABLE Yes

2. VARIABLE LENGTH TEXT Yes

3. REPEATED FIELDS Yes

D. FILE MAINTENANCE

1. ALLOWS ON-LINE
a. CREATION No
b. UPDATE No
c. DELETION Yes
d. EDITING Yes

2. PREPROGRAMMED DATA VALIDATION CHECKS Yes

3. OPTIONAL ORDERING OF ENTERED DATA No

4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING No

E. QUERY

1. USER-SYSTEM INTERACTION:
a. MULTIPLE OPTIONS Yes
b. AT ANY POINT Yes
c. ENGLISH-LINE Yes
d. PHRASING Yes
e. SYSTEM-FORCED DIALOGUE No

2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY No
b. FULL TEXT INVERSION Yes
c. STEMMING PERMITTED Yes
d. SYNONYMS Yes, as equivalents

c. DISPLAY OF RELATED TERMS Yes
f. CHECKING TERM IN CONTROLLED VOCABULARY No

1. GENERAL DESCRIPTION

1. SYSTEM NAME

DIALOG
Lockheed Research Lab.
3251 Hanover
Palo Alto, Calif. 94304
Dr. Roger Surwit
415-493-4411

TELEPHONE

2. SOFTWARE AVAILABILITY

a. FOR PURCHASE
Negotiable
b. FOR LEASE
Yes, by Govt. agencies
Negotiable
Yes, on installation and
maintenance basis.
Negotiable

3. SERVICE AVAILABILITY

a. SEARCH SERVICE
Yes, from Lockheed Palo Alto
via telephone, TWX, and
Tymshare Inc. network for
dial-up user; also Lockheed
high-speed leased line.
Based on data base and
elapsed terminal hours.
Typically, \$25/hr. on ERIC,
\$35/hr. on NTIS, no minimum.
NTIS, ERIC, PANDEX, psych.
Abstracts, COMPENDEX, INSPEC,
and others.

c. TAKES CUSTOMER
DATA BASES
Yes

4. HISTORY OF SOFTWARE

a. FIRST INSTALLATION
1968 at Lockheed, serving
NASA--early version of PECON.
b. SIGNIFICANT
INSTALLATIONS
Lockheed, AEC (Oak Ridge), NASA,
European Space Research
Organization

5. HISTORY OF SERVICE

a. SERVICE INITIATION
1971 (ERIC), 1972 (NTIS)
b. PRESENT USAGE
Nat. Institute of Education,
Dept. of Commerce (NTIS),
state, local and education
agencies; and commercial users.
(More than 1,500 searches,
totally, per month)

6. COMPUTER ENVIRONMENT

1. "HAI" FRAME
IBM 360/370

2. OPERATING SYSTEM
OS/MVT

3. SOURCE LANGUAGE
Assembler

4. TERMINAL TYPES
ASCII compatible, IBM 2260,
CC 30

5. TRANSMISSION RATES
10-480 cps

6. RE-ENTRANT FOR
MULTIPLE USERS
Yes

C. FILE DEFINITION

1. USER DEFINABLE

2. "VARIABLE LENGTH TEXT

3. "RELATED FIELDS

D. FILE MAINTENANCE

1. ALLOW ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING
None, but
transaction
file may be
entered and
edited on-line
for later
processing

2. PREPROGRAMMED DATA

3. VALIDATION CHECKS
Yes

3. OPTIONAL ORDERING OF

4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
No

E. QUERY

1. USER-SYSTEM INTERACTION

a. MULTIPLE OPTIONS
Yes

b. ENGLISH-LIKE
Yes

c. SYSTEM-FORCED
DIALOGUE
No

2. CONTENT SEARCHING

a. CONTROLLED VOCABULARY
Yes

b. FULL TEXT INVERSION
Yes

c. STEMMING PERMITTED
Yes

d. SYNONYMS
No, but SEARCH
SAVE feature
stores
preselected
terms

e. DISPLAY OF

RELATED TERMS
Yes

f. CHITCHING TERM IN CON-
TROLLED VOCABULARY
Yes

1. SEARCH SPECIFICATION

a. MUST NAME FIELDS
No

b. "AND" LIMIT FIELDS
Yes

c. BOOLEAN AND
Yes

d. BOOLEAN OR
Yes

e. BOOLEAN NOT
Yes

f. NESTING OF BOOLEAN
EXPRESSIONS
Yes

g. PHRASE AND DISTANCE
SEARCHING
Yes

h. NATURAL ENGLISH
Yes

i. RANGE SEARCHING
Yes, by
accession no.

4. TUTORIAL FEATURES

a. "HELP" COMMAND
Yes

b. DOCUMENTATION
ON-LINE
Yes

5. SEARCH STRATEGY

a. RANDOM
No

b. SEQUENTIAL
No

c. INDEXED SEQUENTIAL
Yes

F. REPORT GENERATION

1. LANGUAGE TYPE

a. STANDARD OUTPUT
Yes

b. SELECT AMONG
OPTIONS
Yes

c. OWN CODE
No

2. MEDIA FLEXIBILITY

a. OFF-LINE PRINTING
Yes

b. DISPLAY OF GRAPHS
Tables and
histograms
Microform and
photocopy
through batch
subsystem

c. SPECIAL OUTPUTS

3. SPECIAL CAPABILITIES

a. SORTING
Yes

b. SEQUENCING
No

c. COUNTING
Yes

d. ARITHMETIC
No

G. SECURITY PROTECTION

1. TERMINAL
Yes

2. DATA BASE
Yes, on terminal
basis

3. RECORD
No

4. FIELD
No

A. GENERAL DESCRIPTION		
1. SYSTEM NAME ORIGINATOR	DMARS First: Data Corp. Rd. 400 Totten Pond Rd. Waltham, Mass. 02154 (617-890-6701)	
TELEPHONE		
2. SOFTWARE AVAILABILITY	NA	
a. FOR PURCHASE		
b. AT WHAT COST		
c. FOR LEASE		
d. AT WHAT COST		
3. SERVICE AVAILABILITY		
a. SEARCH SERVICE	Yes	
b. AT WHAT COST	\$0.35/cpu sec + \$10/connect hour.	
b. DATA BASES	DOT grants trace data base (soon to be public), other data bases on informal agreement with user-owners.	
c. TAKES CUSTOMER	Yes	
DATA BASES		
4. HISTORY OF SOFTWARE	NA	
a. FIRST INSTALLATION		
b. SIGNIFICANT INSTALLATIONS		
5. HISTORY OF SERVICE		
a. SERVICE INITIATION	3rd quarter, 1972	
b. PRESENT USAGE	30 users in DOT (Off. of Sec., UMTA) + others	
B. COMPUTER ENVIRONMENT		
1. MAIN FRAME	DECSystem 10	
2. OPERATING SYSTEM	TSM (modified by First Data)	
3. SOURCE LANGUAGE	FORTRAN + MACRO-10	
4. TERMINAL TYPES	ASCII, IBM code compatible	
5. TRANSMISSION RATE	10, 15, 30, 120 cps	
6. RE-ENTRANT FOR MULTIPLE USERS	Yes	
C. FILE DEFINITION		
1. USER DEFINABLE	Yes	
2. VARIABLE LENGTH TEXT	Yes	
3. REPEATED FIELDS	No	
D. FILE MAINTENANCE		
1. ALLOWS ON-LINE	Yes	
a. CREATION	Yes	
b. UPDATE	Yes	
c. DELETION	Yes	
d. EDITING	Yes	
2. PREPROGRAMMED DATA VALIDATION CHECKS	Yes	
3. OPTIONAL ORDERING OF ENTERED DATA	Yes	
4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No	
E. QUERY		
1. USER-SYSTEM INTERACTION:		
a. MULTIPLE OPTIONS	Yes	
b. AT ANY POINT	Yes	
c. ENGLISH-LIKE PHRASING	Yes	
d. SYSTEM-FORCED DIALOGUE	No	
2. CONTENT SEARCHING	No	
a. CONTROLLED VOCABULARY	No	
b. FULL TEXT INVERSION	No, embedded string search in named field	
c. STEMMING PERMITTED	Yes, by string search	
d. SYNONYMS	No	
e. DISPLAY OF RELATED TERMS	No	
f. CHECKING TERM IN CON- TROLLED VOCABULARY	No	
3. SEARCH SPECIFICATION		
a. MUST NAME FIELDS	Yes	
b. MAY LIMIT FIELDS	Yes	
c. BOOLEAN AND	Yes	
d. BOOLEAN NOT	Yes	
e. NESTING OF BOOLEAN EXPRESSIONS	Yes	
g. PHRASE AND DISTANCE SEARCHING	No	
h. NATURAL ENGLISH	No	
i. RANGE SEARCHING	Yes	
4. TUTORIAL FEATURES	Yes	
a. "HELP" COMMAND	Yes	
b. DOCUMENTATION ON-LINE	Yes	
5. SEARCH STRATEGY	Yes	
a. RANDOM	Yes	
b. SEQUENTIAL	Yes	
c. INDEXED SEQUENTIAL	Yes	
F. REPORT GENERATION		
1. LANGUAGE TYPE	Yes	
a. STANDARD OUTPUT	Yes	
b. SELECT AMONG OPTIONS	Yes	
c. OWN CODE	Yes	
2. MEDIA FLEXIBILITY	Yes	
a. OFF-LINE PRINTING	No	
b. DISPLAY OF GRAPHS	No	
c. SPECIAL OUTPUTS	No	
3. SPECIAL CAPABILITIES	Yes	
a. SORTING	No	
b. SECURING	Yes	
c. COUNTING	Yes	
d. ARITHMETIC	Yes	
G. SECURITY PROTECTION		
1. TERMINAL	Yes	
2. DATA BASE	Yes	
3. RECORD	No	
4. FIELD	No	

A. GENERAL DESCRIPTION		C. FILE DEFINITION	
1. SYSTEM NAME ORIGINATOR	DML Computer Sciences Corp. Information Network Div. 650 N. Sepulveda Blvd. El Segundo, Ca. 90245 213-678-0311	1. USER DEFINABLE	Yes
TELEPHONE		2. VARIABLE LENGTH TEXT	No, 128 char/field max.
2. SOFTWARE AVAILABILITY	NA	3. REPEATED FIELDS	Yes
a. FOR PURCHASE		D. FILE MAINTENANCE	
b. AT WHAT COST		1. ALLOWS ON-LINE	
c. FOR LEASE		a. CREATION	Yes
d. AT WHAT COST		b. UPDATE	Yes
3. SERVICE AVAILABILITY		c. DELETION	Yes
a. SEARCH SERVICE	Yes, package is available on CSC time-sharing service. Government rates based on usage.	d. EDITING	Yes
b. AT WHAT COST	None public	2. PREPROGRAMMED DATA VALIDATION CHECKS	No, but programmable in DML
c. DATA BASES	Yes	3. OPTIONAL ORDERING OF ENTERED DATA	No, but programmable in DML
d. TAKES CUSTOMER DATA BASES	Yes	4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No
4. HISTORY OF SOFTWARE	NA	E. QUERY	
a. FIRST INSTALLATION		1. USER-SYSTEM INTERACTION	
b. SIGNIFICANT INSTALLATIONS		a. MULTIPLE OPTIONS AT ANY POINT	Yes
5. HISTORY OF SERVICE	March 1972	b. ENGLISH-LIKE PHRASING	Yes
a. SERVICE INITIATION	Approx. 30 Government and commercial users.	c. SYSTEM-FORCED DIALOGUE	No
b. PRESENT USAGE		2. CONTENT SEARCHING	None directly provided but capabilities programmable in DML
6. COMPUTER ENVIRONMENT			
1. MAIN FRAME	Univac 1108	a. CONTROLLED VOCABULARY	
2. OPERATING SYSTEM	CSTS	b. FULL TEXT INVERSION	
3. SOURCE LANGUAGE	Assembler	c. STEERING PERMITTED	
4. TERMINAL TYPES	TTY models 33, 35, 37; IBM 2741; CRT devices.	d. SYNONYMS	
5. TRANSMISSION RATES	10-240 cps	e. DISPLAY OF RELATED TERMS	
6. RE-ENTRANT FOR MULTIPLE USERS	Yes	f. CHECKING TERMS IN CON- TROLLED VOCABULARY	
		F. REPORT GENERATION	
		1. LANGUAGE TYPE	
		a. STANDARD OUTPUT	Yes
		b. SELECTED AMONG OPTIONS	No
		c. OWN CODE	Yes
		2. MEDIA FLEXIBILITY	
		a. OFF-LINE PRINTING	Yes
		b. DISPLAY OF GRAPHS	No
		c. SPECIAL OUTPUTS	No
		3. SPECIAL CAPABILITIES	
		a. SORTING	Yes
		b. SEQUENCING	Yes
		c. COUNTING	Yes
		d. ARITHMETIC	Yes
		G. SECURITY PROTECTION	
		1. TERMINAL	Yes, through operating system
		2. DATA BASE	Yes
		3. RECORD	No
		4. FIELD	No
		3. SEARCH SPECIFICATION	
		a. MUST NAME FIELDS	Yes
		b. MAY LIMIT FIELDS	Yes, for arithmetic comparisons
		c. BOOLEAN AND	Yes
		d. BOOLEAN OR	No
		e. BOOLEAN NOT	Yes
		f. TESTING OF BOOLEAN EXPRESSIONS	No
		g. PHRASE AND DISTANCE	Yes
		h. SEARCHING	No
		i. NATURAL ENGLISH	No
		j. RANGE SEARCHING	Yes
		4. TUTORIAL FEATURES	
		a. "HELP" COMMAND	No
		b. DOCUMENTATION	No
		c. ON-LINE	No
		5. SEARCH STRATEGY	
		a. "RANDOM"	Yes
		b. SEQUENTIAL	Yes
		c. INDEXED SEQUENTIAL	Yes

A. GENERAL DESCRIPTION

1. SYSTEM NAME
a. ORIGINATOR
DRS (Data Retrieval System)
A.R.A.P., Inc.
30 Washington Rd.
Princeton, N.J. 08540
609-452-2950
- TELEPHONE
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
AT WHAT COST
Yes
\$2300 (GK IBM 1130 version),
\$2800 (GK IBM 1130 version),
\$9500 base for IBM 360/370
version.
b. FOR LEASE
AT WHAT COST
Yes
\$115-140/mo. (2 yr. payout for
IBM 1130 versions.)
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
AT WHAT COST
By arrangement
b. DATA BASES
None of wide interest.
c. TAKES CUSTOMER
DATA BASES
Yes

4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
1970 (IBM 1130), 1973 (IBM 370)
b. SIGNIFICANT
INSTALLATIONS
Over 40 installations of IBM
1130 version.
5. HISTORY OF SERVICE
a. SERVICE INITIATION
NA
b. PRESENT USAGE
About 12 users

B. COMPUTER ENVIRONMENT

1. MAIN FRAME
IBM 1130, IBM 360/370
2. OPERATING SYSTEM
OS/1130 version 2. 05/360,370
3. SOURCE LANGUAGE
FORTRAN
4. TERMINAL TYPES
IBM 2741, 1050, ASR-33 TTY
(with adaptor)
5. TRANSMISSION RATES
10-120 cps
6. RE-ENTRY FOR
MULTIPLE USERS
No

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
No, 1000
char/field
limit
3. REPEATED FIELD
No
- D. FILE MAINTENANCE
1. ALLOWS ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING
No
Yes
Yes
No
2. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes
3. OPTIONAL ORDERING OF
ENTERED DATA
Yes
4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
No

E. QUERY

1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
Yes
b. AT ANY POINT
No
c. ENGLISH-LING.
PHRASING
No
d. SYSTEM-FORCED
DIALOGUE
No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
Yes, if
keyword field
defined for
a file
No
b. FULL TEXT INTERSECTION
No
c. STEMLING PERMITTED
No
d. SYNONYMS
No
e. DISPLAY OF
RELATED TERMS
No
f. CHECKING TERM IN CON-
TROLLED VOCABULARY
No

3. SEARCH SPECIFICATION

- a. MUST NAME FIELDS
Yes
- b. MAY LIMIT FIELDS
Yes
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
Yes
- f. NESTING OF BOOLEAN
EXPRESSIONS
Yes
- g. PHRASE AND DISTANCE
SEARCHING
Yes, phrases
only in one
field
- h. NATURAL ENGLISH
Yes
- i. RANGE SEARCHING
Yes
4. TUTORIAL FEATURES
a. "HELP" COMMAND
None
b. DOCUMENTATION
ON-LINE
5. SEARCH STRATEGY
a. RANDOM
No
b. SEQUENTIAL
Yes
c. INDEXED SEQUENTIAL
No

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT
No
b. SELECT AMONG
OPTIONS
Yes
c. OWN CODE
Yes
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
Yes
b. DISPLAY OF GRAPHS
No
c. SPECIAL OUTPUTS
Yes, rag
tape and
hard copy
3. SPECIAL CAPABILITIES
a. SORTING
Yes
b. SEQUENCING
Yes
c. COUNTING
Yes
d. ARITHMETIC
Yes
- G. SECURITY PROTECTION
1. TERMINAL
Yes
2. DATA BASE
Yes
3. RECORD
Yes
4. FIELD
Yes

A. CRITICAL DESCRIPTION		C. FILE DEFINITION		D. FILE MAINTENANCE		E. OTHER		F. REPORT GENERATION		G. SECURITY PROTECTION	
1. SYSTEM NAME ORIGINATOR	SE/1 System Development Corp. 2500 Colorado Ave San Jose, Calif. 95060 415-363-6411	1. USER DEFINABLE	Yes	1. FILE MAINTENANCE	Yes	1. USER-CYCLES INITIATION	Yes	1. LANGUAGE TYPE	Yes, 3 kinds	1. SPECIAL CAPABILITIES	Yes
2. SOFTWARE AVAILABILITY	Yes	2. VARIANTS IN NUMBER OF	Yes	2. ALLOW ON-LINE	No	2. TELETYPE OPTION	Yes	2. MEDIA FLEXIBILITY	Yes	2. SECURITY PROTECTION	Yes
3. SERVICE AVAILABILITY	Yes	3. VARIANTS IN NUMBER OF	Yes	3. CREATION	Yes	3. ENGLISH-LINE	Yes	3. OFF-LINE PRINTING	Yes	3. DATA BASE	Yes
4. HISTORY OF SOFTWARE	None	4. VARIANTS IN NUMBER OF	Yes	4. DELETION	No	4. CYCLES-OUTPUT	No	4. DISPLAY OF GRAPHS	Yes	4. RECORD	Yes
5. HISTORY OF SERVICE	Run on SDC's 370/156	5. VARIANTS IN NUMBER OF	Yes	5. EDITING	No	5. LINKAGE	None	5. SPECIAL CAPABILITIES	Yes	5. FIELD	Yes
6. PRESENT USAGE	Prices available on request.	6. VARIANTS IN NUMBER OF	Yes	6. AUTOMATIC OR	No	6. CONTING SEARCHING	None	6. SORTING	Yes		
	Uses customer-supplied data	7. VARIANTS IN NUMBER OF	Yes	7. MACHINE-AIDED	No	7. FULL TEXT INTERSECTION	None	7. SORTING	Yes		
	bases only.	8. VARIANTS IN NUMBER OF	Yes	8. CONTENT INDEXING	No	8. SEARCHING PERMITTED	None	8. PRINTING	Yes		
	April 1960	9. VARIANTS IN NUMBER OF	Yes	9. AUTOMATIC OR	No	9. DISPLAY ON	None	9. SPECIAL CAPABILITIES	Yes		
	Dept. of Health, Education &	10. VARIANTS IN NUMBER OF	Yes	10. MACHINE-AIDED	No	10. ATTACHED TO	None	10. SPECIAL CAPABILITIES	Yes		
	Welfare, Coast Community	11. VARIANTS IN NUMBER OF	Yes	11. CONTENT INDEXING	No	11. CHECKING ERROR IN COM-	None	11. SPECIAL CAPABILITIES	Yes		
	College District, Los Angeles	12. VARIANTS IN NUMBER OF	Yes	12. AUTOMATIC OR	No	12. CHECKING ERROR IN COM-	None	12. SPECIAL CAPABILITIES	Yes		
	Police Dept.	13. VARIANTS IN NUMBER OF	Yes	13. MACHINE-AIDED	No	13. CHECKING ERROR IN COM-	None	13. SPECIAL CAPABILITIES	Yes		
	May, 1973	14. VARIANTS IN NUMBER OF	Yes	14. CONTENT INDEXING	No	14. CHECKING ERROR IN COM-	None	14. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	15. VARIANTS IN NUMBER OF	Yes	15. AUTOMATIC OR	No	15. CHECKING ERROR IN COM-	None	15. SPECIAL CAPABILITIES	Yes		
	National Commission on the	16. VARIANTS IN NUMBER OF	Yes	16. MACHINE-AIDED	No	16. CHECKING ERROR IN COM-	None	16. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	17. VARIANTS IN NUMBER OF	Yes	17. CONTENT INDEXING	No	17. CHECKING ERROR IN COM-	None	17. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	18. VARIANTS IN NUMBER OF	Yes	18. AUTOMATIC OR	No	18. CHECKING ERROR IN COM-	None	18. SPECIAL CAPABILITIES	Yes		
	Education	19. VARIANTS IN NUMBER OF	Yes	19. MACHINE-AIDED	No	19. CHECKING ERROR IN COM-	None	19. SPECIAL CAPABILITIES	Yes		
	May, 1973	20. VARIANTS IN NUMBER OF	Yes	20. CONTENT INDEXING	No	20. CHECKING ERROR IN COM-	None	20. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	21. VARIANTS IN NUMBER OF	Yes	21. AUTOMATIC OR	No	21. CHECKING ERROR IN COM-	None	21. SPECIAL CAPABILITIES	Yes		
	National Commission on the	22. VARIANTS IN NUMBER OF	Yes	22. MACHINE-AIDED	No	22. CHECKING ERROR IN COM-	None	22. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	23. VARIANTS IN NUMBER OF	Yes	23. CONTENT INDEXING	No	23. CHECKING ERROR IN COM-	None	23. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	24. VARIANTS IN NUMBER OF	Yes	24. AUTOMATIC OR	No	24. CHECKING ERROR IN COM-	None	24. SPECIAL CAPABILITIES	Yes		
	Education	25. VARIANTS IN NUMBER OF	Yes	25. MACHINE-AIDED	No	25. CHECKING ERROR IN COM-	None	25. SPECIAL CAPABILITIES	Yes		
	May, 1973	26. VARIANTS IN NUMBER OF	Yes	26. CONTENT INDEXING	No	26. CHECKING ERROR IN COM-	None	26. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	27. VARIANTS IN NUMBER OF	Yes	27. AUTOMATIC OR	No	27. CHECKING ERROR IN COM-	None	27. SPECIAL CAPABILITIES	Yes		
	National Commission on the	28. VARIANTS IN NUMBER OF	Yes	28. MACHINE-AIDED	No	28. CHECKING ERROR IN COM-	None	28. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	29. VARIANTS IN NUMBER OF	Yes	29. CONTENT INDEXING	No	29. CHECKING ERROR IN COM-	None	29. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	30. VARIANTS IN NUMBER OF	Yes	30. AUTOMATIC OR	No	30. CHECKING ERROR IN COM-	None	30. SPECIAL CAPABILITIES	Yes		
	Education	31. VARIANTS IN NUMBER OF	Yes	31. MACHINE-AIDED	No	31. CHECKING ERROR IN COM-	None	31. SPECIAL CAPABILITIES	Yes		
	May, 1973	32. VARIANTS IN NUMBER OF	Yes	32. CONTENT INDEXING	No	32. CHECKING ERROR IN COM-	None	32. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	33. VARIANTS IN NUMBER OF	Yes	33. AUTOMATIC OR	No	33. CHECKING ERROR IN COM-	None	33. SPECIAL CAPABILITIES	Yes		
	National Commission on the	34. VARIANTS IN NUMBER OF	Yes	34. MACHINE-AIDED	No	34. CHECKING ERROR IN COM-	None	34. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	35. VARIANTS IN NUMBER OF	Yes	35. CONTENT INDEXING	No	35. CHECKING ERROR IN COM-	None	35. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	36. VARIANTS IN NUMBER OF	Yes	36. AUTOMATIC OR	No	36. CHECKING ERROR IN COM-	None	36. SPECIAL CAPABILITIES	Yes		
	Education	37. VARIANTS IN NUMBER OF	Yes	37. MACHINE-AIDED	No	37. CHECKING ERROR IN COM-	None	37. SPECIAL CAPABILITIES	Yes		
	May, 1973	38. VARIANTS IN NUMBER OF	Yes	38. CONTENT INDEXING	No	38. CHECKING ERROR IN COM-	None	38. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	39. VARIANTS IN NUMBER OF	Yes	39. AUTOMATIC OR	No	39. CHECKING ERROR IN COM-	None	39. SPECIAL CAPABILITIES	Yes		
	National Commission on the	40. VARIANTS IN NUMBER OF	Yes	40. MACHINE-AIDED	No	40. CHECKING ERROR IN COM-	None	40. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	41. VARIANTS IN NUMBER OF	Yes	41. CONTENT INDEXING	No	41. CHECKING ERROR IN COM-	None	41. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	42. VARIANTS IN NUMBER OF	Yes	42. AUTOMATIC OR	No	42. CHECKING ERROR IN COM-	None	42. SPECIAL CAPABILITIES	Yes		
	Education	43. VARIANTS IN NUMBER OF	Yes	43. MACHINE-AIDED	No	43. CHECKING ERROR IN COM-	None	43. SPECIAL CAPABILITIES	Yes		
	May, 1973	44. VARIANTS IN NUMBER OF	Yes	44. CONTENT INDEXING	No	44. CHECKING ERROR IN COM-	None	44. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	45. VARIANTS IN NUMBER OF	Yes	45. AUTOMATIC OR	No	45. CHECKING ERROR IN COM-	None	45. SPECIAL CAPABILITIES	Yes		
	National Commission on the	46. VARIANTS IN NUMBER OF	Yes	46. MACHINE-AIDED	No	46. CHECKING ERROR IN COM-	None	46. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	47. VARIANTS IN NUMBER OF	Yes	47. CONTENT INDEXING	No	47. CHECKING ERROR IN COM-	None	47. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	48. VARIANTS IN NUMBER OF	Yes	48. AUTOMATIC OR	No	48. CHECKING ERROR IN COM-	None	48. SPECIAL CAPABILITIES	Yes		
	Education	49. VARIANTS IN NUMBER OF	Yes	49. MACHINE-AIDED	No	49. CHECKING ERROR IN COM-	None	49. SPECIAL CAPABILITIES	Yes		
	May, 1973	50. VARIANTS IN NUMBER OF	Yes	50. CONTENT INDEXING	No	50. CHECKING ERROR IN COM-	None	50. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	51. VARIANTS IN NUMBER OF	Yes	51. AUTOMATIC OR	No	51. CHECKING ERROR IN COM-	None	51. SPECIAL CAPABILITIES	Yes		
	National Commission on the	52. VARIANTS IN NUMBER OF	Yes	52. MACHINE-AIDED	No	52. CHECKING ERROR IN COM-	None	52. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	53. VARIANTS IN NUMBER OF	Yes	53. CONTENT INDEXING	No	53. CHECKING ERROR IN COM-	None	53. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	54. VARIANTS IN NUMBER OF	Yes	54. AUTOMATIC OR	No	54. CHECKING ERROR IN COM-	None	54. SPECIAL CAPABILITIES	Yes		
	Education	55. VARIANTS IN NUMBER OF	Yes	55. MACHINE-AIDED	No	55. CHECKING ERROR IN COM-	None	55. SPECIAL CAPABILITIES	Yes		
	May, 1973	56. VARIANTS IN NUMBER OF	Yes	56. CONTENT INDEXING	No	56. CHECKING ERROR IN COM-	None	56. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	57. VARIANTS IN NUMBER OF	Yes	57. AUTOMATIC OR	No	57. CHECKING ERROR IN COM-	None	57. SPECIAL CAPABILITIES	Yes		
	National Commission on the	58. VARIANTS IN NUMBER OF	Yes	58. MACHINE-AIDED	No	58. CHECKING ERROR IN COM-	None	58. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	59. VARIANTS IN NUMBER OF	Yes	59. CONTENT INDEXING	No	59. CHECKING ERROR IN COM-	None	59. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	60. VARIANTS IN NUMBER OF	Yes	60. AUTOMATIC OR	No	60. CHECKING ERROR IN COM-	None	60. SPECIAL CAPABILITIES	Yes		
	Education	61. VARIANTS IN NUMBER OF	Yes	61. MACHINE-AIDED	No	61. CHECKING ERROR IN COM-	None	61. SPECIAL CAPABILITIES	Yes		
	May, 1973	62. VARIANTS IN NUMBER OF	Yes	62. CONTENT INDEXING	No	62. CHECKING ERROR IN COM-	None	62. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	63. VARIANTS IN NUMBER OF	Yes	63. AUTOMATIC OR	No	63. CHECKING ERROR IN COM-	None	63. SPECIAL CAPABILITIES	Yes		
	National Commission on the	64. VARIANTS IN NUMBER OF	Yes	64. MACHINE-AIDED	No	64. CHECKING ERROR IN COM-	None	64. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	65. VARIANTS IN NUMBER OF	Yes	65. CONTENT INDEXING	No	65. CHECKING ERROR IN COM-	None	65. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	66. VARIANTS IN NUMBER OF	Yes	66. AUTOMATIC OR	No	66. CHECKING ERROR IN COM-	None	66. SPECIAL CAPABILITIES	Yes		
	Education	67. VARIANTS IN NUMBER OF	Yes	67. MACHINE-AIDED	No	67. CHECKING ERROR IN COM-	None	67. SPECIAL CAPABILITIES	Yes		
	May, 1973	68. VARIANTS IN NUMBER OF	Yes	68. CONTENT INDEXING	No	68. CHECKING ERROR IN COM-	None	68. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	69. VARIANTS IN NUMBER OF	Yes	69. AUTOMATIC OR	No	69. CHECKING ERROR IN COM-	None	69. SPECIAL CAPABILITIES	Yes		
	National Commission on the	70. VARIANTS IN NUMBER OF	Yes	70. MACHINE-AIDED	No	70. CHECKING ERROR IN COM-	None	70. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	71. VARIANTS IN NUMBER OF	Yes	71. CONTENT INDEXING	No	71. CHECKING ERROR IN COM-	None	71. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	72. VARIANTS IN NUMBER OF	Yes	72. AUTOMATIC OR	No	72. CHECKING ERROR IN COM-	None	72. SPECIAL CAPABILITIES	Yes		
	Education	73. VARIANTS IN NUMBER OF	Yes	73. MACHINE-AIDED	No	73. CHECKING ERROR IN COM-	None	73. SPECIAL CAPABILITIES	Yes		
	May, 1973	74. VARIANTS IN NUMBER OF	Yes	74. CONTENT INDEXING	No	74. CHECKING ERROR IN COM-	None	74. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	75. VARIANTS IN NUMBER OF	Yes	75. AUTOMATIC OR	No	75. CHECKING ERROR IN COM-	None	75. SPECIAL CAPABILITIES	Yes		
	National Commission on the	76. VARIANTS IN NUMBER OF	Yes	76. MACHINE-AIDED	No	76. CHECKING ERROR IN COM-	None	76. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	77. VARIANTS IN NUMBER OF	Yes	77. CONTENT INDEXING	No	77. CHECKING ERROR IN COM-	None	77. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	78. VARIANTS IN NUMBER OF	Yes	78. AUTOMATIC OR	No	78. CHECKING ERROR IN COM-	None	78. SPECIAL CAPABILITIES	Yes		
	Education	79. VARIANTS IN NUMBER OF	Yes	79. MACHINE-AIDED	No	79. CHECKING ERROR IN COM-	None	79. SPECIAL CAPABILITIES	Yes		
	May, 1973	80. VARIANTS IN NUMBER OF	Yes	80. CONTENT INDEXING	No	80. CHECKING ERROR IN COM-	None	80. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	81. VARIANTS IN NUMBER OF	Yes	81. AUTOMATIC OR	No	81. CHECKING ERROR IN COM-	None	81. SPECIAL CAPABILITIES	Yes		
	National Commission on the	82. VARIANTS IN NUMBER OF	Yes	82. MACHINE-AIDED	No	82. CHECKING ERROR IN COM-	None	82. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	83. VARIANTS IN NUMBER OF	Yes	83. CONTENT INDEXING	No	83. CHECKING ERROR IN COM-	None	83. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	84. VARIANTS IN NUMBER OF	Yes	84. AUTOMATIC OR	No	84. CHECKING ERROR IN COM-	None	84. SPECIAL CAPABILITIES	Yes		
	Education	85. VARIANTS IN NUMBER OF	Yes	85. MACHINE-AIDED	No	85. CHECKING ERROR IN COM-	None	85. SPECIAL CAPABILITIES	Yes		
	May, 1973	86. VARIANTS IN NUMBER OF	Yes	86. CONTENT INDEXING	No	86. CHECKING ERROR IN COM-	None	86. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	87. VARIANTS IN NUMBER OF	Yes	87. AUTOMATIC OR	No	87. CHECKING ERROR IN COM-	None	87. SPECIAL CAPABILITIES	Yes		
	National Commission on the	88. VARIANTS IN NUMBER OF	Yes	88. MACHINE-AIDED	No	88. CHECKING ERROR IN COM-	None	88. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	89. VARIANTS IN NUMBER OF	Yes	89. CONTENT INDEXING	No	89. CHECKING ERROR IN COM-	None	89. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	90. VARIANTS IN NUMBER OF	Yes	90. AUTOMATIC OR	No	90. CHECKING ERROR IN COM-	None	90. SPECIAL CAPABILITIES	Yes		
	Education	91. VARIANTS IN NUMBER OF	Yes	91. MACHINE-AIDED	No	91. CHECKING ERROR IN COM-	None	91. SPECIAL CAPABILITIES	Yes		
	May, 1973	92. VARIANTS IN NUMBER OF	Yes	92. CONTENT INDEXING	No	92. CHECKING ERROR IN COM-	None	92. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	93. VARIANTS IN NUMBER OF	Yes	93. AUTOMATIC OR	No	93. CHECKING ERROR IN COM-	None	93. SPECIAL CAPABILITIES	Yes		
	National Commission on the	94. VARIANTS IN NUMBER OF	Yes	94. MACHINE-AIDED	No	94. CHECKING ERROR IN COM-	None	94. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	95. VARIANTS IN NUMBER OF	Yes	95. CONTENT INDEXING	No	95. CHECKING ERROR IN COM-	None	95. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	96. VARIANTS IN NUMBER OF	Yes	96. AUTOMATIC OR	No	96. CHECKING ERROR IN COM-	None	96. SPECIAL CAPABILITIES	Yes		
	Education	97. VARIANTS IN NUMBER OF	Yes	97. MACHINE-AIDED	No	97. CHECKING ERROR IN COM-	None	97. SPECIAL CAPABILITIES	Yes		
	May, 1973	98. VARIANTS IN NUMBER OF	Yes	98. CONTENT INDEXING	No	98. CHECKING ERROR IN COM-	None	98. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	99. VARIANTS IN NUMBER OF	Yes	99. AUTOMATIC OR	No	99. CHECKING ERROR IN COM-	None	99. SPECIAL CAPABILITIES	Yes		
	National Commission on the	100. VARIANTS IN NUMBER OF	Yes	100. MACHINE-AIDED	No	100. CHECKING ERROR IN COM-	None	100. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	101. VARIANTS IN NUMBER OF	Yes	101. CONTENT INDEXING	No	101. CHECKING ERROR IN COM-	None	101. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	102. VARIANTS IN NUMBER OF	Yes	102. AUTOMATIC OR	No	102. CHECKING ERROR IN COM-	None	102. SPECIAL CAPABILITIES	Yes		
	Education	103. VARIANTS IN NUMBER OF	Yes	103. MACHINE-AIDED	No	103. CHECKING ERROR IN COM-	None	103. SPECIAL CAPABILITIES	Yes		
	May, 1973	104. VARIANTS IN NUMBER OF	Yes	104. CONTENT INDEXING	No	104. CHECKING ERROR IN COM-	None	104. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	105. VARIANTS IN NUMBER OF	Yes	105. AUTOMATIC OR	No	105. CHECKING ERROR IN COM-	None	105. SPECIAL CAPABILITIES	Yes		
	National Commission on the	106. VARIANTS IN NUMBER OF	Yes	106. MACHINE-AIDED	No	106. CHECKING ERROR IN COM-	None	106. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	107. VARIANTS IN NUMBER OF	Yes	107. CONTENT INDEXING	No	107. CHECKING ERROR IN COM-	None	107. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	108. VARIANTS IN NUMBER OF	Yes	108. AUTOMATIC OR	No	108. CHECKING ERROR IN COM-	None	108. SPECIAL CAPABILITIES	Yes		
	Education	109. VARIANTS IN NUMBER OF	Yes	109. MACHINE-AIDED	No	109. CHECKING ERROR IN COM-	None	109. SPECIAL CAPABILITIES	Yes		
	May, 1973	110. VARIANTS IN NUMBER OF	Yes	110. CONTENT INDEXING	No	110. CHECKING ERROR IN COM-	None	110. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	111. VARIANTS IN NUMBER OF	Yes	111. AUTOMATIC OR	No	111. CHECKING ERROR IN COM-	None	111. SPECIAL CAPABILITIES	Yes		
	National Commission on the	112. VARIANTS IN NUMBER OF	Yes	112. MACHINE-AIDED	No	112. CHECKING ERROR IN COM-	None	112. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	113. VARIANTS IN NUMBER OF	Yes	113. CONTENT INDEXING	No	113. CHECKING ERROR IN COM-	None	113. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	114. VARIANTS IN NUMBER OF	Yes	114. AUTOMATIC OR	No	114. CHECKING ERROR IN COM-	None	114. SPECIAL CAPABILITIES	Yes		
	Education	115. VARIANTS IN NUMBER OF	Yes	115. MACHINE-AIDED	No	115. CHECKING ERROR IN COM-	None	115. SPECIAL CAPABILITIES	Yes		
	May, 1973	116. VARIANTS IN NUMBER OF	Yes	116. CONTENT INDEXING	No	116. CHECKING ERROR IN COM-	None	116. SPECIAL CAPABILITIES	Yes		
	Under service agreements:	117. VARIANTS IN NUMBER OF	Yes	117. AUTOMATIC OR	No	117. CHECKING ERROR IN COM-	None	117. SPECIAL CAPABILITIES	Yes		
	National Commission on the	118. VARIANTS IN NUMBER OF	Yes	118. MACHINE-AIDED	No	118. CHECKING ERROR IN COM-	None	118. SPECIAL CAPABILITIES	Yes		
	Financing of Post Secondary	119. VARIANTS IN NUMBER OF	Yes	119. CONTENT INDEXING	No	119. CHECKING ERROR IN COM-	None	119. SPECIAL CAPABILITIES	Yes		
	Education, UCLA Vocational	120. VARIANTS									

A. GENERAL DESCRIPTION	EMISARI Mathematics and Computation Laboratory Office of Frequency Preparedness 7706 Old Springhouse Rd. McLean, Va. 22101 703-393-7710	C. FILE DEFINITION	1. USER DEFINABLE Yes	3. SEARCH SPECIFICATION	a. MUST NAME FIELDS No
1. SYSTEM NAME ORIGINATOR		2. VARIABLE LENGTH TEXT Yes	Yes	b. MAY LIMIT FIELDS Yes	Yes
TELEPHONE		3. REPEATED FIELDS No	No	c. BOOLEAN AND Yes	Yes
2. SOFTWARE AVAILABILITY	Source free to government users; compiler is proprietary (see B.3)	3. FILE MAINTENANCE	Yes	d. EXPRESSIONS Yes	Yes
a. FOR PURCHASE AT WHAT COST		1. ALLOWS ON-LINE a. CRUATION Yes	Yes	e. PHRASE AND DISTANCE SEARCHING Yes, for phrases.	Yes
b. FOR LEASE AT WHAT COST		b. UPDATE Yes	Yes	f. NATURAL ENGLISH SEARCHING Yes	Yes
3. SERVICE AVAILABILITY		c. DELETION Yes	Yes	g. RANGE SEARCHING Yes	Yes
a. SEARCH SERVICE		d. EDITING Yes	Yes	h. TUTORIAL FEATURES a. "HELP" COMMAND Yes	Yes
b. DATA BASES		2. PREPROGRAMMED DATA VALIDATION CHECKS Yes	Yes	b. DOCUMENTATION ON-LINE Yes	Yes
c. TAKES CUSTOMER DATA BASES		3. OPTIONAL ORDERING OF ENTERED DATA No	No	c. SEARCH STRATEGY a. RANDOM Yes	Yes
4. HISTORY OF SOFTWARE	Aug., 1971	4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING No	No	b. SEQUENTIAL Yes	Yes
a. FIRST INSTALLATION		F. REPORT GENERATION	No	c. INDEXED SEQUENTIAL No	No
b. SIGNIFICANT INSTALLATIONS	Internal Revenue Service, Office of Emergency Preparedness	E. QUERY	No	1. LANGUAGE TYPE a. STANDARD OUTPUT Yes	Yes
5. HISTORY OF SERVICE	No	1. USER-SYSTEM INTERACTION	Yes	b. SELECT AMONG OPTIONS No	No
a. SERVICE INITIATION		a. MULTIPLE OPTIONS AT ANY POINT Yes	Yes	c. OWN CODE No	No
b. PRESENT USAGE		b. ENGLISH-LIKE PHRASING No	No	2. MEDIA FLEXIBILITY a. OFF-LINE PRINTING No	No
6. COMPUTER ENVIRONMENT		c. SYSTEM-FORCED DIALOGUE No	No	b. DISPLAY OF GRAPHS No	No
1. MAIN FRAME	UNIVAC 1108	2. CONTENT SEARCHING	No	c. SPECIAL OUTPUTS No	No
2. OPERATING SYSTEM	EXFC 8	a. CONTROLLED VOCABULARY Yes	Yes	3. SPECIAL CAPABILITIES a. SORTING No	No
3. SOURCE LANGUAGE	RASIC (proprietary compiler; vendor- Language and System Development, Silver Spring, Md.)	b. FULL TEXT INVERSION No	No	b. SIFTING Yes	Yes
4. TERMINAL TYPES	ASCII compatible	c. SIFTING PERMITTED No	No	c. COUNTING Yes	Yes
5. TRANSMISSION RATES	10 or 30 cps	e. DISPLAY OF RELATED TERMS No	No	d. ARITHMETIC Yes	Yes
6. RE-ENTRANT FOR MULTIPLE USERS	Yes	f. CHECKING TERM IN CON- TROLLED VOCABULARY Yes	Yes	G. SECURITY PROTECTION	Yes
				1. TERMINAL Yes, on text blocks	Yes
				2. DATA BASE No	No
				3. RECORD No	No
				4. FIELD No	No

A. GENERAL DESCRIPTION	
1. SYSTEM NAME ORIGINATOR	ENFOR, Engineering Numerics Corp., 8585 N. Stemmons Fwy., Dallas, Tx. 75247 214-630-0640
TELEPHONE	
2. SOFTWARE AVAILABILITY	Yes
a. FOR PURCHASE	Minimum software \$25,000
b. FOR LEASE	Yes
c. AT WHAT COST	Two-year lease, approx. \$1250/mo.
3. SERVICE AVAILABILITY	NA
a. SEARCH SERVICE	
b. DATA BASES	
c. TAKES CUSTOMER DATA BASES	
4. HISTORY OF SOFTWARE	NA
a. FIRST INSTALLATION	About 1968
b. SIGNIFICANT INSTALLATIONS	
5. HISTORY OF SERVICE	NA
a. SERVICE INITIATION	
b. PRESENT USAGE	
B. COMPUTER ENVIRONMENT	
1. MAIN FRAME	CDC 6000 series
2. OPERATING SYSTEM	SCOPE or KRONOS
3. SOURCE LANGUAGE	FORTRAN, COBOL
4. TERMINAL TYPES	CDC 200 terminal, TTY-compatible
5. TRANSMISSION RATES	10 cps to 2400 baud
6. RE-ENTRANT FOR MULTIPLE USERS	No
C. FILE DEFINITION	
1. USER DEFINABLE	Yes
2. VARIABLE LENGTH TEXT	Yes
3. REPEATED FIELDS	Yes
D. FILE MAINTENANCE	
1. ALLOWS ON-LINE	No on-line capability
a. CREATION	
b. UPDATE	
c. DELETION	
d. EDITING	
2. PREPROGRAMMED DATA VALIDATION CHECKS	Yes
3. OPTIONAL ORDERING OF ENTERED DATA	No
4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No
E. QUERY	
1. USER-SYSTEM INTERACTION	
a. MULTIPLE OPTIONS	No
b. ENGLISH-LIKE PHRASING	Yes
c. SYSTEM-FORCED DIALOGUE	Yes
2. CONTENT SEARCHING	Yes, on user specified files
a. CONTROLLED VOCABULARY	Yes
b. FULL TEXT INVERSION	No
c. STEMMING PERMITTED	Yes
d. SYNONYMS	Yes
e. DISPLAY OF RELATED TERMS	Yes
f. CHECKING TERM IN CONTROLLED VOCABULARY	Yes
F. REPORT GENERATION	
1. LANGUAGE TYPE	Yes
a. STANDARD OUTPUT	Yes
b. SELECT AMONG OPTIONS	Yes
c. OWN CODE	Yes
2. MEDIA FLEXIBILITY	Yes
a. OFF-LINE PRINTING	No
b. DISPLAY OF GRAPHS	No
c. SPECIAL OUTPUTS	None
3. SPECIAL CAPABILITIES	
a. SORTING	Yes
b. SEQUENCING	Yes
c. COUNTING	No
d. ARITHMETIC	Yes (through dictionary)
G. SECURITY PROTECTION	
1. TERMINAL	Yes
2. DATA BASE	Yes
3. RECORD	No
4. FILE	Yes (through dictionary)

A. GENERAL DESCRIPTION

1. SYSTEM NAME:
ORIGINATOR

FLEXIMPIS
General Electric Co.
Information Services Business
Division
7735 Old Georgetown Rd.
Bethesda, Md. 20014
301-657-2120

TELEPHONE

2. SOFTWARE AVAILABILITY: NA

a. FOR PURCHASE
AT WHAT COST
b. FOR LEASE
AT WHAT COST

3. SERVICE AVAILABILITY

a. SEARCH SERVICE
AT WHAT COST
b. DATA BASES
c. TAKES CUSTOMER
DATA BASES

Available with time-sharing
service contract
None
Yes

4. HISTORY OF SOFTWARE: NA

a. FIRST INSTALLATION:
b. SIGNIFICANT
INSTALLATIONS

5. HISTORY OF SERVICE

a. SERVICE INITIATION: 1970
b. PRESENT USAGE

Available on GE national
network.

B. COMPUTER ENVIRONMENT

1. MAIN FRAME

GE 600 series

2. OPERATING SYSTEM

GE MARK III time-sharing system

3. SOURCE LANGUAGE

BASIC, some assembler

4. TERMINAL TYPES

TTY compatible terminals

5. TRANSMISSION RATES

10, 15, 30 cps

6. RE-ENTRANT FOR

"MULTIPLE USERS"

No

C. FILE DEFINITION

1. USER DEFINABLE: Yes

2. VARIABLE LENGTH TEXT

Yes

3. REPEATED FIELDS

No

D. FILE MAINTENANCE

1. ALLOWS ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING

Yes
Yes
Yes
Yes

2. PREPROGRAMMED DATA
VALIDATION CHECKS

Yes

3. OPTIONAL ORDERING OF
ENTERED DATA

Yes (with own
code (BASIC))

4. AUTOMATIC OR
"ACHIEVE-AIDED"
CONTENT INDEXING

No

F. QUERY

1. USER-SYSTEM INTERACTION

a. MULTIPLE OPTIONS
AT ANY POINT
b. ENGLISH-LIKE
PARACING
c. SYSTEM-FORCED
DIALOGUE

No
Yes (BASIC-like
syntax)
Yes

2. CONTENT SEARCHING

None

a. CONTROLLED VOCABULARY
b. FULL TEXT INTERSECTION
c. STEERING PERMITTED
d. SYNONYMS
e. DISPLAY OF
RELATED TERMS
f. CHUCKING TERM IN CON-
TROLLED VOCABULARY

3. SEARCH SPECIFICATION:

a. "JUST NAME FIELDS"
b. "ANY LIMIT FIELDS"
c. BOOLEAN AND
d. BOOLEAN OR
e. BOOLEAN NOT

Yes
Yes
Yes
Yes
Yes, in
"BUT" field

f. LISTING OF BOOLEAN
EXPRESSIONS

No

g. PHRASE AND DISTANCE
SEARCHING

No

h. NATURAL ENGLISH

No

i. WARD SEARCHING

Yes

4. TUTORIAL FEATURES

None

a. "HELP" COMMAND
b. DOCUMENTATION
ON-LINE

No

5. SEARCH STRATEGY

No

a. RANDOM

No

b. SEQUENTIAL

Yes

c. INDEXED SEQUENTIAL

No

F. REPORT GENERATION

1. LANGUAGE TYPE

No

a. STANDARD OUTPUT
b. SELECT AMONG
OPTIONS

No

c. OUT CODE

Yes

2. MEDIA FLEXIBILITY

Yes

a. OFF-LINE PRINTING

Yes

b. DISPLAY OF GRAPHS

Yes

c. SPECIAL OUTPUTS

No

3. SPECIAL CAPABILITIES

Yes

a. SORTING

Yes

b. SEQUENCING

Yes

c. COUNTING

Yes

d. PRINTING

Yes

G. SECURITY PROTECTION

1. TERMINAL

Yes

2. DATA BASE

Yes

3. RECORD

No

4. FIELD

No

A. GENERAL DESCRIPTION

1. SYSTEM NAME ORIGINATOR

CI*
TWM Systems Group
7600 Colshire Dr.
McLean, Va. 22101
703-893-2000

TELEPHONE

2. SOFTWARE AVAILABILITY

a. FOR PURCHASE

AT WHAT COST

b. FOR LEASE

AT WHAT COST

No
Yes
Initial installation price
\$12,500; monthly lease price
\$1,750 to commercial users.
Available to Government
agencies by contract.

3. SERVICE AVAILABILITY

a. SEARCH SERVICE

Planned for Sept., 1973 under
Computer Sciences Corp. INFONET
time-sharing service.

AT WHAT COST

b. DATA BASES

c. TAKES CUSTOMER

DATA BASES

4. HISTORY OF SOFTWARE

a. FIRST INSTALLATION

b. SIGNIFICANT

INSTALLATIONS

January 1968

Department of Agriculture's
Forest Service, NASA's Manned
Space Flight Center

5. HISTORY OF SERVICE

a. SERVICE INITIATION

b. PRESENT USAGE

B. COMPUTER ENVIRONMENT

(2 versn is exist;
corresponding data on separate
lines)

1. MAIN FRAME

IBM 360 series
Univac 1100 series

2. OPERATING SYSTEM

OS. PCP/VT or "VT, TSO
EXEC 8, EXEC 2

3. SOURCE LANGUAGE

Assembler F
Univac Assembler

4. TERMINAL TYPES

IRM 1050, 2240, 2741, 2780,
TTY, Uniscopes, 1905

5. TRANSMISSION RATES

30 cps
120 cps

6. RE-ENTRANT FOR MULTIPLE USERS

Yes

C. FILE DEFINITION

1. USER DEFINABLE

Yes

2. VARIABLE LENGTH TEXT

No, approx. 600
char./field max.
Univac 1100 series
used for processing.

3. REPEATED FIELDS

Yes

D. FILE MAINTENANCE

1. ALLOWS ON-LINE

a. CREATION

b. UPDATE

c. DELETION

d. EDITING

Yes
Yes
Yes
Yes

2. PREPROGRAMMED DATA VALIDATION CHECKS

Yes

3. OPTIONAL ORDERING OF ENTRÉD DATA

Yes, elements
only

4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING

No

E. QUERY

1. USER-SYSTEM INTERACTION

a. MULTIPLE OPTIONS

AT ANY POINT

b. ENGLISH-LIKE

PHRASING

c. SYSTEM-FORCED DIALOGUE

Yes
Yes
No

2. CONTENT SEARCHING

a. CONTROLLED VOCABULARY

b. FULL TEXT INVERSION

c. STEMMING PERMITTED

d. SYNONYMS

e. DISPLAY OF RELATED TERMS

f. CHECKING TERM IN CON- TROLLED VOCABULARY

Yes
No
No
Yes
No
No

3. SEARCH SPECIFICATION

a. "JUST NAME FIELDS

b. "RAY LIMIT FIELDS

c. BOOLEAN AND

d. BOOLEAN OR

e. BOOLEAN NOT

f. NESTING OF BOOLEAN EXPRESSIONS

g. PHRASE AND DISTANCE

h. SEARCHING

i. NATURAL ENGLISH

j. RANGE SEARCHING

Yes
Yes
Yes
Yes
Yes
Yes
No
No
Yes

4. TUTORIAL FEATURES

a. "HELP" COMMAND

b. DOCUMENTATION

c. ON-LINE

No
No
No

5. SEARCH STRATEGY

a. RANDOM

b. SEQUENTIAL

c. INDEXED SEQUENTIAL

Yes
No
No

F. REPORT GENERATION

1. LANGUAGE TYPE

a. STANDARD OUTPUT

b. SELECT AMONG

OPTIONS

c. ORG CODE

Yes
Yes
Yes
Yes

2. MEDIA FLEXIBILITY

a. OFF-LINE PRINTING

b. DISPLAY OF GRAPHS

c. SPECIAL OUTPUTS

Yes
Yes
No

3. SPECIAL CAPABILITIES

a. SORTING

b. SEQUENCING

c. COUNTING

d. ARITHMETIC

Yes
Yes
Yes
Yes

G. SECURITY PROTECTION

1. TERMINAL

2. DATA BASE

3. RECORD

4. FIELD

Yes
Yes
No
Yes

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
GIPSY
University of Oklahoma, Office
of Research Admin.,
1808 Newton Drive,
Norman, Oklahoma, 73069
405-321-6812
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
AT WHAT COST
Yes, federal government and
non-profit organizations.
\$8,000 + \$550 per month during
first year; includes training,
installation, and maintenance.
Monthly charge reduced after
one year.
No
- b. FOR LEASE
AT WHAT COST
Yes, through Univ. of Oklahoma
Computing Center
By arrangement
U.S. Geological Survey and
American Petroleum Institute
data bases, by special
arrangement.
Yes
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
AT WHAT COST
b. DATA BASES
c. TAKES CUSTOMER
DATA BASES
Yes
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
Operational at University of
Oklahoma since July 1969
b. SIGNIFICANT
INSTALLATIONS
Department of Interior (USGS),
University of Missouri,
Oklahoma State Univ., U.S.
Dept. of Commerce (NOAA)
1973
Not available
5. HISTORY OF SERVICE
a. SERVICE INITIATION
b. PRESENT USAGE
1973
Not available
6. COMPUTER ENVIRONMENT
1. MAIN FRAME
IBM 360 series, minimum of two
2311 disk drives, 90K bytes
storage
OS/360
2. OPERATING SYSTEM
360 Assembler
3. SOURCE LANGUAGE
IBM 1050, 2741, and TTY
terminals
4. TERMINAL TYPES
110 to 150 Baud
5. TRANSMISSION RATES
6. RE-ENTRANT FOR
MULTIPLE USERS
No

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
No
- D. FILE MAINTENANCE
1. ALLOWS ON-LINE
a. CREATION
No
b. UPDATE
No
c. DELETION
No
d. EDITING
No
2. PRE-PROGRAMMED DATA
VALIDATION CHECKS
Yes, syntax
errors only
3. OPTIONAL ORDERING OF
ENTIRE DATA
No
4. AUTOMATIC OR
"MACHINE-AIDED"
CONTENT INDEXING
Yes, via a
separate
program
- E. QUERY
1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
AT ANY POINT
Yes
b. ENGLISH-LINK
PHRASING
Yes
c. SYSTEM-FORCED
DIALOGUE
No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
Yes
b. FULL TEXT INTERSECTION
Yes
c. STEMMING PERMITTED
Yes
d. SYNONYMS
No
e. DISPLAY OF
RELATED TERMS
No
f. CHECKING TERM IN CON-
TROLLED VOCABULARY
No

3. SEARCH SPECIFICATION

- a. MUST HAVE FIELDS
Yes
- b. MAY LIMIT FIELDS
Yes
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
Yes
- f. NESTING OF BOOLEAN
EXPRESSIONS
Yes
- g. PHRASE AND DISTANCE
Yes
- h. SEARCHING
Yes
- i. NATURAL ENGLISH
Yes
- j. RANGE SEARCHING
Yes
4. TUTORIAL FEATURES
a. "HELP" COMMAND
Yes
- b. DOCUMENTATION
ON-LINE
Yes
5. SEARCH STRATEGY
a. RANDOM
No
b. SEQUENTIAL
Yes
c. INDEXED SEQUENTIAL
No
- F. REPORT GENERATION
1. LANGUAGE TYPE
a. STANDARD OUTPUT
Yes
b. SELECT AMONG
OPTIONS
Yes
c. OWN CODE
Yes
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
Yes
b. DISPLAY OF GRAPHIC
No
c. SPECIAL OUTPUTS
Yes, microfilm
3. SPECIAL CAPABILITIES
a. SORTING
Yes
b. SEQUENCING
Yes
c. COUNTING
Yes
d. ARITHMETIC
Yes
- G. SECURITY PROTECTION
1. TERMINAL
No
2. DATA BASE
Yes
3. RECORD
No
4. FIELD
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
IARS
Interactive Sciences Corp.
60 Brooks Dr.
Braintree, Mass. 02184
617-848-2660
- TELEPHONE
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
AT WHAT COST
No
b. FOR LEASE
AT WHAT COST
Yes, on perpetual license
\$5k
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
AT WHAT COST
Yes
Surcharge for use over normal
time-sharing cost
(\$3.75/connect hour +
\$.0025/resource unit)
- b. DATA BASES
- c. TAKES CUSTOMER
DATA BASES
Yes
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS
NA
5. HISTORY OF SERVICE
a. SERVICE INITIATION
b. PRESENT USAGE
4th quarter, 1972
Data not available
- B. COMPUTER ENVIRONMENT
1. MAIN FRAME
DECSystem 10
2. OPERATING SYSTEM
TSM
3. SOURCE LANGUAGE
FORTRAN + MACRO-10
4. TERMINAL TYPES
ASCII, IBM Correspondence code
terminals
5. TRANSMISSION RATES
10, 15, 30 cps
6. RE-ENTRANT FOR
MULTIPLE USERS
Yes

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
Yes, up to 2,000
characters long
3. REPEATED FIELDS
No

D. FILE MAINTENANCE

1. ALLOWS ON-LINE
a. CREATION
Yes
b. UPDATE
Yes
c. DELETION
Yes
d. EDITING
Yes
2. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes

3. OPTIONAL ORDERING OF ENTERED DATA

4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
No

E. QUERY

1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
AT ANY POINT
Yes
b. ENGLISH-LIKE
PHRASING
Yes
c. SYSTEM-FORCED
DIALOGUE
Partial; some
modules are
dialogue driven
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
No
b. FULL TEXT INTERSECTION
Yes (character
string search)
c. STEMMING PERMITTED
No
d. SYNONYMS
No
e. DISPLAY OF
RELATED TERMS
No
f. CHECKING TERM IN COM-
PLETE VOCABULARY
No

3. SEARCH SPECIFICATION

- a. JUST NAME FIELDS
Yes
- b. DAY LIMIT FIELDS
Yes
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
No
- f. NESTING OF BOOLEAN
EXPRESSIONS
No
- g. PHRASE AND DISTANCE
SEARCHING
Yes, by
character
string
search

- h. NATURAL ENGLISH
i. RANGE SEARCHING
Yes

4. TUTORIAL FEATURES

- a. "HELP" COMMAND
Yes
- b. DOCUMENTATION
ON-LINE
No

5. SEARCH STRATEGY

- a. "RANDOM"
Yes
- b. ESSENTIAL
Yes
- c. INDEXED SEQUENTIAL
Yes

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT
Yes
- b. SELECT AMONG
OPTIONS
Yes
- c. OWN CODE
Yes

2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
Yes
- b. DISPLAY OF GRAPHS
No
- c. SPECIAL OUTPUTS
No

3. SPECIAL CAPABILITIES

- a. SORTING
Yes
- b. SEQUENCING
No
- c. COUNTING
Yes
- d. ARITHMETIC
Yes

G. SECURITY PROTECTION

1. TERMINAL
Yes
2. DATA BASE
Yes
3. RECORD
No
4. FIELD
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
IMS of Office of Emergency Preparedness
Executive Office of the President
Office of Emergency Preparedness
Washington, D.C. 20504
202-395-4831
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE Yes
AT WHAT COST Free for government users
b. FOR LEASE NA
AT WHAT COST NA
3. SERVICE AVAILABILITY
a. SEARCH SERVICE NA
AT WHAT COST NA
b. DATA BASES
c. TAKES CUSTOMER DATA BASES
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION The random access version was operational since 1971
b. SIGNIFICANT INSTALLATIONS None
5. HISTORY OF SERVICE
a. SERVICE INITIATION NA
b. PRESENT USAGE
8. COMPUTER ENVIRONMENT
1. MAIN FRAME UNIVAC 1109
2. OPERATING SYSTEM EXEC 8
3. SOURCE LANGUAGE VULCAN (a string processing language) plus assembly language plus FORTRAN interface
4. TERMINAL TYPES Any TTY and CRT terminals in use on the 1108
5. TRANSMISSION RATES 10,15,30 cps
6. RE-ENTRANT FOR MULTIPLE USERS Yes, due to property of VULCAN

C. FILE DEFINITION

1. USER DEFINABLE Yes
2. VARIABLE LENGTH TEXT Yes
3. REPEATED FIELDS No
- D. FILE MAINTENANCE
1. ALLOWS ON-LINE
a. CREATION Yes
b. UPDATE Yes
c. DELETION Yes
d. EDITING Yes
2. PREPROGRAMMED DATA
VALIDATION CHECKS Yes
3. OPTIONAL ORDERING OF ENTERED DATA No
4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING No
- E. QUERY
1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS Yes
AT ANY POINT Yes, command-like
b. ENGLISH-LIKE PHRASING
c. SYSTEM-FORCED DIALOGUE No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY No
b. FULL TEXT INVERSION Yes
c. STEMMING PERMITTED Yes
d. SYNONYMS No
e. DISPLAY OF RELATED TERMS No
f. CHECKING TERM IN CONTROLLED VOCABULARY No

A. GENERAL DESCRIPTION

1. SYSTEM NAME
IMS/360 Version 2 with IOF
(Information Management System
with Interactive Query Facility)
IBM
1133 Westchester Ave.
White Plains, N.Y. 10604
Local Representative

2. SOFTWARE AVAILABILITY

a. FOR PURCHASE
AT WHAT COST
No

b. FOR LEASE
AT WHAT COST
Yes
\$550/mo.-IMS/360 V2 (basic
system)
+\$625/mo.-Data Comm. Feature
+\$300/mo.-IOF

3. SERVICE AVAILABILITY

a. SEARCH SERVICE
AT WHAT COST
NA

b. DATA BASES
c. TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE

a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS
Nov. 1972
Not available

5. HISTORY OF SERVICE

a. SERVICE INITIATION
b. PRESENT USAGE
NA

B. COMPUTER ENVIRONMENT

1. MAIN FRAME
IBM 360, 370

2. OPERATING SYSTEM
OS/MFT, MFT, VS 1, VS 2

3. SOURCE LANGUAGE
Assembler

4. TERMINAL TYPES
IBM 3270, 2260, 2265, 2740,
1050

5. TRANSMISSION RATES
134.5, 600, 1200, 2000, 2400,
4800, 7200 bps

6. RE-ENTRANT FOR
MULTIPLE USERS
Partial (will support multiple
users)

C. FILE DEFINITION

1. USER DEFINABLE
Yes

2. VARIABLE LENGTH TEXT
No

3. REPEATED FIELDS
Yes

D. FILE MAINTENANCE

1. ALLOWS ON-LINE
a. CREATION
Yes
b. UPDATE
Yes
c. DELETION
Yes
d. EDITING
Yes

2. PREPROGRAMMED DATA VALIDATION CHECKS

No

3. OPTIONAL ORDERING OF ENTERED DATA

Yes

4. AUTOMATIC OR "MACHINE-AIDED" CONTENT INDEXING

No

E. QUERY

1. USER-SYSTEM INTERACTION

a. "MULTIPLE OPTIONS"
Yes

b. AT ANY POINT
Yes (using
"null" words)
No

c. ENGLISH-LINE
PHRASING
No

d. SYSTEM-FORCED
DIALOGUE

2. CONTENT SEARCHING

None

a. CONTROLLED VOCABULARY
b. FULL TEXT INVERSION
c. STEMMING PERMITTED
d. SYNONYMS
e. DISPLAY OF
RELATED TERMS
f. CHECKING TERM IN CON-
TROLLED VOCABULARY

3. SEARCH SPECIFICATION

a. "JUST NAME FIELDS"
Yes

b. "ANY LIMIT FIELDS"
Yes

c. BOOLEAN AND
Yes

d. BOOLEAN OR
Yes

e. BOOLEAN NOT
Yes

f. NESTING OF BOOLEAN
EXPRESSIONS
Yes

g. PHRASE AND DISTANCE
SEARCHING
No

h. NATURAL ENGLISH
Yes

i. RANGE SEARCHING
Yes

4. TUTORIAL FEATURES

a. "HELP" COMMAND
None

b. DOCUMENTATION
ON-LINE

5. SEARCH STRATEGY

a. RANDOM
Yes

b. SEQUENTIAL
Yes

c. INDEXED SEQUENTIAL
Yes

F. REPORT GENERATION

1. LANGUAGE TYPE

a. STANDARD OUTPUT
Yes

b. SELECT AMONG
OPTIONS
No

c. OWN CODE
No

2. MEDIA FLEXIBILITY

a. OFF-LINE PRINTING
Yes

b. DISPLAY OF GRAPHS
Yes, with CRT

c. SPECIAL OUTPUTS
No

3. SPECIAL CAPABILITIES

a. SORTING
Yes

b. SQUEEZING
No

c. COUNTING
Yes

d. ARITHMETIC
Yes

G. SECURITY PROTECTION

1. TERMINAL
Yes

2. DATA BASE
Yes

3. RECORD
No

4. FIELD
No

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION:	
1. SYSTEM NAME ORIGINATOR	IMS-8 SPERRY RAND CORP. UNIVAC DIV. 2121 Wisconsin Ave., N.W. Washington, D.C. 20007 202-338-9500	1. USER DEFINABLE	Yes	a. MUST HAVE FIELDS	Yes
2. SOFTWARE AVAILABILITY	Available at no charge to UNIVAC 1108 users	2. VARIABLE LENGTH TEXT	No	b. MAY LIMIT FIELDS	Yes
a. FOR PURCHASE AT WHAT COST		3. REPEATED FIELDS	Yes	c. BOOLEAN AND	Yes
b. FOR LEASE AT WHAT COST		D. FILE "MAINTENANCE"		d. BOOLEAN OR	Yes
3. SERVICE AVAILABILITY	NA	1. ALLOWS ON-LINE	No	e. BOOLEAN NOT	Yes
a. SEARCH SERVICE AT WHAT COST		a. CREATION	Yes	f. NESTING OF BOOLEAN EXPRESSIONS	Yes
b. DATA BASES		b. UPDATE	Yes	g. PHRASE AND DISTANCE SEARCHING	No
c. TAKES CUSTOMER DATA BASES		c. DELETION	Yes	h. NATURAL ENGLISH	No
4. HISTORY OF SOFTWARE	1969-1970	d. EDITING	Yes	i. RANGE SEARCHING	Yes
a. FIRST INSTALLATION	About 45, incl. HUD, NASA, SCA, other Government agencies.	2. PREPROGRAMMED DATA VALIDATION CHECKS	Yes	4. TUTORIAL FEATURES	None
b. SIGNIFICANT INSTALLATIONS	NA	3. OPTIONAL ORDERING OF ENTERED DATA	Yes	a. "FIELD" COMMAND	
5. HISTORY OF SERVICE		4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No	b. DOCUMENTATION ON-LINE	
a. SERVICE INITIATION		F. QUERY		5. SEARCH STRATEGY	No
b. PRESENT USAGE		1. USER-SYSTEM INTERACTION		a. RANDOM	No
B. COMPUTER ENVIRONMENT		a. MULTIPLE OPTIONS	Yes	b. SEQUENTIAL	No
1. MAIN FRAME	UNIVAC 1108	b. ENGLISH-LIKE PHRASING	Yes	c. INDEXED SEQUENTIAL	Yes
2. OPERATING SYSTEM	EXEC 8	c. SYSTEM-FORCED DIALOGUE	Yes	F. REPORT GENERATION	
3. SOURCE LANGUAGE	COBOL, Assembler	2. CONTENT SEARCHING		1. LANGUAGE TYPE	Yes
4. TERMINAL TYPES	TTY-compatible	a. CONTROLLED VOCABULARY	Yes	a. STANDARD OUTPUT	Yes
5. TRANSMISSION RATES	10-30 cps	b. FULL TEXT INVERSION	No	b. SELECT AMONG OPTIONS	No
6. RE-ENTRANT FOR MULTIPLE USERS	Yes	c. SYNONYMS	No	c. OWN CODE	Yes
		d. DISPLAY OF RELATED TERMS	No	2. MEDIA FLEXIBILITY	Yes
		e. CHECKING TERM IN CON- TROLLED VOCABULARY	No	a. OFF-LINE PRINTING	No
				b. DISPLAY OF GRAPHS	No
				c. SPECIAL OUTPUTS	Yes
				3. SPECIAL CAPABILITIES	Yes
				a. SORTING	No
				b. SEQUENCING	Yes
				c. COUNTING	Yes
				d. ARITHMETIC	Yes
				G. SECURITY PROTECTION	
				1. TERMINAL	Yes
				2. DATA BASE	Yes
				3. RECORD	No
				4. FIELD	No

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME ORIGINATOR	INQUIRE Infodata Systems, Inc. 1901 N. Fort "yer Dr. Arlington, Va. 22209 703-524-6700	1. USER DEFINABLE	Yes	a. "JUST NAME" FIELDS	No
2. SOFTWARE AVAILABILITY	Yes	2. VARIABLE LENGTH TEXT	Yes	b. "DAY LIMIT" FIELDS	Yes
a. FOR PURCHASE	\$38,500	3. REPEATED FIELDS	Yes	c. BOOLEAN AND	Yes
b. FOR LEASE	\$1,325/mo.			d. BOOLEAN OR	Yes
3. SERVICE AVAILABILITY	NA			e. LISTING OF BOOLEAN EXPRESSIONS	Yes
a. SEARCH SERVICE AT WHAT COST		D. FILE "MAINTENANCE"		f. PHRASE AND DISTANCE SEARCHING	Yes
b. DATA BASES		1. ALLOWS ON-LINE	Yes	g. NATURAL ENGLISH	Yes
c. TAKES CUSTOMER DATA BASES		a. CREATION	Yes	h. RANGE SEARCHING	Yes
4. HISTORY OF SOFTWARE	July, 1969	b. UPDATE	Yes		
a. FIRST INSTALLATION		c. DELETION	Yes	4. TUTORIAL FEATURES	Yes
b. SIGNIFICANT INSTALLATIONS	E. R. Squibb & Sons, State of Ohio, LEAA, ESSO	d. EDITING	Yes	a. "HELP" COMMAND	Yes
5. HISTORY OF SERVICE	NA	2. PREPROGRAMMED DATA VALIDATION CHECKS	Yes	b. DOCUMENTATION	Yes
a. SERVICE INITIATION		3. OPTIONAL ORDERING OF ENTERED DATA	Updates indices, new records appended	c. ON-LINE	Yes
b. PRESENT USAGE		4. AUTOMATIC OR "MACHINE-AIDED" CONTENT INDEXING	No		
B. COMPUTER ENVIRONMENT				5. SEARCH STRATEGY	Yes
1. MAIN FRAME	IBM 360, 370, mod 40 & up			a. RANDOM	Yes
2. OPERATING SYSTEM	OS			b. SEQUENTIAL	Yes
3. SOURCE LANGUAGE	PL/1			c. INDEXED SEQUENTIAL	Yes
4. TERMINAL TYPES	TTY, IBM 2741, or compatible				
5. TRANSMISSION RATES	As supplied by particular environment			F. REPORT GENERATION	
6. RE-ENTRANT FOR MULTIPLE USERS	No			1. LANGUAGE TYPE	Yes
				a. STANDARD OUTPUT	Yes
				b. SELECT AMONG OPTIONS	Yes
				c. OWN CODE	Yes
				2. MEDIA FLEXIBILITY	Yes
				a. OFF-LINE PRINTING	Yes
				b. DISPLAY OF GRAPHIC	No
				c. SPECIAL OUTPUTS	No
				3. SPECIAL CAPABILITIES	Yes
				a. SORTING	Yes
				b. SEQUENCING	Yes
				c. COUNTING	Yes
				d. ARITHMETIC	Yes
				G. SECURITY PROTECTION	
				1. TERMINAL	Yes
				2. DATA BASE	Yes, if requested
				3. RECORD	Yes, if requested
				4. FIELD	requested

A. GENERAL DESCRIPTION	
1. SYSTEM NAME	INSYTE (Information Systems Technology)
ORIGINATOR	Response Technology, Inc 4064 S W Donovan Seattle, Washington 98136 206-937-7845
TELEPHONE	
2. SOFTWARE AVAILABILITY	
a. FOR PURCHASE	Yes
AT WHAT COST	\$27,000
b. FOR LEASE	Yes
AT WHAT COST	\$12,500 + \$425 month
3. SERVICE AVAILABILITY	May be available on time-sharing services
a. SEARCH SERVICE	
AT WHAT COST	
b. DATA BASES	
c. TAKES CUSTOMER DATA BASES	
4. HISTORY OF SOFTWARE	1979
a. FIRST INSTALLATION	
b. SIGNIFICANT INSTALLATIONS	Remote Computing Corp., Univ. of Washington
5. HISTORY OF SERVICE	
a. SERVICE INITIATION	
b. PRESENT USAGE	Burroughs B-5500 Burroughs Time-sharing COBOL TTY compatible 10, 15, 30 cps Yes
B. COMPUTER ENVIRONMENT	
1. MAIN FRAME	
2. OPERATING SYSTEM	
3. SOURCE LANGUAGE	
4. TERMINAL TYPES	
5. TRANSMISSION RATES	
6. RE-ENTRANT FOR MULTIPLE USERS	

C. FILE DEFINITION	Yes
1. USER DEFINABLE	Yes
2. VARIABLE LENGTH TEXT	No
3. REPEATED FIELDS	No
D. FILE MAINTENANCE	
1. ALLOWS ON-LINE	Yes
a. CREATION	Yes
b. UPDATE	Yes
c. DELETION	Yes
d. EDITING	Yes
2. PREPROGRAMMED DATA VALIDATION CHECKS	Yes
3. OPTIONAL ORDERING OF ENTERED DATA	Yes
4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No
F. QUERY	
1. USER-SYSTEM INTERACTION	
a. MULTIPLE OPTIONS	No
b. AT ANY POINT	Yes
c. ENGLISH-LINE PHRASING	No
d. SYSTEM-FORCED DIALOGUE	Yes
2. CONTENT SEARCHING	
a. CONTROLLED VOCABULARY	Yes
b. FULL TEXT INVERSION	Yes
c. STEMMING PERMITTED	Yes
d. SYNONYMS	Yes
e. DISPLAY OF RELATED TERMS	No
f. CHECKING TERM IN CONTROLLED VOCABULARY	No
G. SECURITY PROTECTION	
1. TERMINAL	No
2. DATA BASE	Yes
3. RECORD	Yes
4. FIELD	Yes
3. SEARCH SPECIFICATION	
a. MUST NAME FIELDS	Yes
b. MAY LIMIT FIELDS	Yes
c. BOOLEAN AND	Yes
d. BOOLEAN OR	Yes
e. BOOLEAN NOT	Yes
f. MIXING OF BOOLEAN EXPRESSIONS	Yes
g. PHRASE AND DISTANCE SEARCHING	Yes
h. NATURAL ENGLISH	Yes
i. RANGE SEARCHING	Yes
4. TUTORIAL FEATURES	
a. "HELP" COMMANDS	No
b. DOCUMENTATION ON-LINE	No
5. SEARCH STRATEGY	
a. RANDOM	Yes
b. SEQUENTIAL	No
c. INDEXED SEQUENTIAL	No
F. REPORT GENERATION	
1. LANGUAGE TYPE	
a. STANDARD OUTPUT	Yes
b. SELECT AMONG OPTIONS	Yes
c. OWN CODE	No
2. MEDIA FLEXIBILITY	
a. OFF-LINE PRINTING	Yes
b. DISPLAY OF GRAPHS	No
c. SPECIAL OUTPUTS	No
3. SPECIAL CAPABILITIES	
a. SORTING	Yes
b. SPOUNCING	Yes
c. COUNTING	Yes
d. ARITHMETIC	Yes

A. GENERAL DESCRIPTION:

1. SYSTEM NAME
ORIGINATOR
LEADERWARE
Center for Information Science
Lehigh University
Bethlehem, Pennsylvania 18015
215-691-7000, X631
- TELEPHONE
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
AT WHAT COST
b. FOR LEASE
AT WHAT COST
By arrangement
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
AT WHAT COST
Yes
\$55.00 per connect hour (\$45.00
for government users)
b. DATA BASES
Chemical Abstracts, Engineering
Index, Civil Engineering, and
Tall Buildings (locally
defined)
c. TAKES CUSTOMER
DATA BASES
Yes (by arrangement)
Only implemented at Lehigh
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS
March, 1971
Currently serving 12
interdisciplinary research
centers at Lehigh, seven local
colleges, federal agencies, and
industrial customers.
5. HISTORY OF SERVICE
a. SERVICE INITIATION
b. PRESENT USAGE
CDC 6400
COPE 3.3, INTERCOM 3.0
Primarily FORTRAN
TTY and CRT
110, 300, 1200, 2400 baud
No
6. RE-ENTRANT FOR
MULTIPLE USERS

C. FILE DEFINITION

1. USER DEFINABLE
Yes, with
assistance
Yes
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
Yes
4. FILE MAINTENANCE
a. ALLOWS ON-LINE
b. CREATION
c. UPDATE
d. DELETION
e. EDITING
No
No
No
No
No
5. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes
6. OPTIONAL ORDERING OF
ENTERED DATA
Yes, merge records
into file, but not
fields into records
7. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
Yes, a separate
package exists

E. QUERY

1. "USER-SYSTEM" INTERACTION
a. MULTIPLE OPTIONS
b. AT ANY POINT
c. ENGLISH-LIKE
PHRASING
d. SYSTEM-FORCED
DIALOGUE
Yes
Yes
Yes
No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
b. FULL TEXT INVERSION
c. STEMMING PERMITTED
d. SYNONYMS
e. DISPLAY OF
RELATED TERMS
f. CHECKING TERM IN CON-
TROLLED VOCABULARY
No
Yes
Yes
Yes
Yes
NA

B. COMPUTER ENVIRONMENT

1. MAIN FRAME
2. OPERATING SYSTEM
3. SOURCE LANGUAGE
4. TERMINAL TYPES
5. TRANSMISSION RATES
6. RE-ENTRANT FOR
MULTIPLE USERS

3. SEARCH SPECIFICATION

- a. MUST HAVE FIELDS
No
- b. MAY LIMIT FIELDS
No
- c. BOOLEAN AND
No
- d. BOOLEAN OR
No
- e. BOOLEAN NOT
No
- f. NESTING OF BOOLEAN
EXPRESSIONS
No
- g. PHRASE AND DISTANCE
No
- h. NATURAL ENGLISH
Yes
- i. RANGE SEARCHING
No
4. TUTORIAL FEATURES
a. "HELP" COMMAND
b. DOCUMENTATION
ON-LINE
No
No
5. SEARCH STRATEGY
a. RANDOM
b. STRUCTURAL
c. INDEXED SEQUENTIAL
Yes
No
Yes
7. REPORT GENERATION
1. LANGUAGE TYPE
a. STANDARD OUTPUT
b. SELECT AMONG
OPTIONS
c. OWN CODE
Yes
Yes
No
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
b. DISPLAY OF GRAPHIC
c. SPECIAL OUTPUTS
Yes
No
No
3. SPECIAL CAPABILITIES
a. SORTING
b. SEQUENCING
c. COUNTING
d. ARITHMETIC
No
Yes
Yes
No
6. SECURITY PROTECTION
1. TERMINAL
2. DATA BASE
3. RECORD
4. FIELD
Yes
Yes
Yes
Yes

A. GENERAL DESCRIPTION					
1. SYSTEM NAME	MARK IV (with on-line special feature)				
ORIGINATOR	INFORMATICS, Inc. MARK IV Systems Co. 21050 Vanowen St. Canoga Park, CA 91303 (713) 887-9121				
TELEPHONE					
2. SOFTWARE AVAILABILITY					
a. FOR PURCHASE	Yes				
AT WHAT COST	\$37,000 + \$10,000 for On-line feature				
b. FOR LEASE	Yes				
AT WHAT COST	Many plans, including installment purchase				
3. SERVICE AVAILABILITY					
a. SEARCH SERVICE	Yes, through commercial time-sharing companies.				
AT WHAT COST	Machine utilization costs plus surcharge.				
b. DATA BASES	N/A				
c. TAKES CUSTOMER DATA BASES	Yes				
4. HISTORY OF SOFTWARE	Evolved from MARK I, II, III				
a. FIRST INSTALLATION	1968				
b. SIGNIFICANT INSTALLATIONS	U.S. House of Representatives, HEM, Federal Reserve Board, GM, EXXON, Eastern Airlines				
5. HISTORY OF SERVICE					
a. SERVICE INITIATION	1972				
b. PRESENT USAGE	Not available				
B. COMPUTER ENVIRONMENT					
1. MAIN FRAME	IBM 360				
2. OPERATING SYSTEM	OS/360 with TSO (for On-line feature), or with VP/CSS on 360/67; OS/VS1				
3. SOURCE LANGUAGE	Assembler				
4. TERMINAL TYPES	Any standard device				
5. TRANSMISSION RATES	Any standard rate				
6. RE-ENTRANT FOR MULTIPLE USERS	No				
C. FILE DEFINITION					
1. USER DEFINABLE	Yes				
2. VARIABLE LENGTH TEXT	Yes				
3. REPEATED FIELDS	Yes				
D. FILE MAINTENANCE					
1. ALLOWS ON-LINE	Yes				
a. CREATION	Yes				
b. UPDATE	Yes				
c. DELETION	Yes				
d. EDITING	Yes				
2. PREPROGRAMMED DATA VALIDATION CHECKS	Yes				
3. OPTIONAL ORDERING OF ENTERED DATA	Yes (automatic with appropriate file structure)				
4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No				
E. QUERY					
1. USER-SYSTEM INTERACTION	EDIT IV is only interactive part of system; query is remote batch or time-shared execution with on-line preparation				
F. REPORT GENERATION					
1. LANGUAGE TYPE	a. STANDARD OUTPUT b. SELECT AMONG OPTIONS c. OWN CODE				
2. MEDIA FLEXIBILITY	a. OFF-LINE PRINTING b. DISPLAY OF GRAPHS				
3. SPECIAL CAPABILITIES	a. SORTING b. SEQUENCING c. COUNTING d. ARITHMETIC				
G. SECURITY PROTECTION					
1. TERMINAL	Yes				
2. DATA BASE	Yes				
3. RECORD	No				
4. FIELD	No				

A. GENERAL DESCRIPTION	C. FILE DEFINITION	E. QUERY	G. SECURITY PROTECTION
1. SYSTEM NAME ORIGINATOR	1. USER DEFINABLE	1. User-SYSTEM INTERACTION	1. TERMINAL
MARS III CONTROL DATA Corp. 5272 River Rd. Washington, D.C. 20016 301-652-2268	2. VARIABLE LENGTH TEXT	a. MULTIPLE OPTIONS	2. DATA BASE
TELEPHONE	3. REPEATED FIELDS	b. ENGLISH-LINE PHRASING	3. RECORD
2. SOFTWARE AVAILABILITY	D. FILE MAINTENANCE	c. SYSTEM-FORCED DIALOGUE	4. FIELD
a. FOR PURCHASE	1. ALLOWS ON-LINE	2. CONTENT SEARCHING	
AT WHAT COST	a. CREATION	a. CONTROLLED VOCABULARY	
b. FOR LEASE	b. UPDATE	b. FULL TEXT INVERSION	
AT WHAT COST	c. DELETION	c. STEMMING PERMITTED	
3. SERVICE AVAILABILITY	d. EDITING	d. SYNONYMS	
a. SEARCH SERVICE	2. PREPROGRAMMED DATA VALIDATION CHECKS	e. DISPLAY OF RELATED TERMS	
AT WHAT COST	3. OPTIONAL ORDERING OF ENTERED DATA	f. CHECKING TERM IN CON-	
b. DATA BASES	4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING		
c. TAKES CUSTOMER DATA BASES			
4. HISTORY OF SOFTWARE	F. QUERY		
a. FIRST INSTALLATION	1. User-SYSTEM INTERACTION		
b. SIGNIFICANT INSTALLATIONS	a. MULTIPLE OPTIONS		
April, 1970	b. AT ANY POINT		
U.S. Coast Guard, New York Dept. of Education, Hughes Aircraft Corp.	c. ENGLISH-LINE PHRASING		
5. HISTORY OF SERVICE	d. SYSTEM-FORCED DIALOGUE		
a. SERVICE INITIATION			
b. PRESENT USAGE			
NA			
B. COMPUTER ENVIRONMENT			
1. MAIN FRAME			
CDC 3300, 3500			
2. OPERATING SYSTEM			
MASTER			
3. SOURCE LANGUAGE			
COMPASS (90%), American National Standards Institute COBOL (10%)			
4. TERMINAL TYPES			
CRT, TTY			
5. TRANSMISSION RATES			
Up to 4800 baud			
6. RE-ENTRANT FOR MULTIPLE USERS			
No			

A. GENERAL DESCRIPTION

1. SYSTEM NAME

MARS VI
Control Data Corp.
5272 River Rd.
Washington, D.C. 20016
301-652-2268

TELEPHONE

2. SOFTWARE AVAILABILITY

- a. FOR PURCHASE AT WHAT COST
No, but perpetual license available for \$18K
- b. FOR LEASE AT WHAT COST
Yes
\$600/mo. (commercial royalty)

3. SERVICE AVAILABILITY

- a. SEARCH SERVICE AT WHAT COST
NA
- b. DATA BASES
- c. TAKES CUSTOMER DATA BASES

4. HISTORY OF SOFTWARE

- a. FIRST INSTALLATION
late 1969
- b. SIGNIFICANT INSTALLATIONS
About 10 incl. NSRDC, Univ. of Texas, Michigan State Univ.

5. HISTORY OF SERVICE

- a. SERVICE INITIATION
NA
- b. PRESENT USAGE

B. COMPUTER ENVIRONMENT

- 1. MAIN FRAME
CDC CYBER/70, 6000 series
- 2. OPERATING SYSTEM
SCOPE 3, INTERCOM 4
- 3. SOURCE LANGUAGE
FORTRAN, COMPASS
- 4. TERMINAL TYPES
TTY 33, 35; CRT
- 5. TRANSMISSION RATES
10-30 cps, 100 cps, 2400 baud
- 6. RE-ENTRANT FOR MULTIPLE USERS
No

C. FILE DEFINITION

1. USER DEFINABLE

Yes

2. VARIABLE LENGTH TEXT

No

3. REPEATED FIELDS

Yes

D. FILE MAINTENANCE

- 1. ALLOWS ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING

Yes
Yes
Yes
Yes

2. PREPROGRAMMED DATA VALIDATION CHECKS

Yes

3. OPTIONAL ORDERING OF ENTERED DATA

Automatic

4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING

No

E. QUERY

1. USER-SYSTEM INTERACTION

- a. MULTIPLE OPTIONS AT ANY POINT
- b. ENGLISH-LIKE PHRASING
- c. SYSTEM-FORCED DIALOGUE

Yes
Yes
No

2. CONTENT SEARCHING

- a. CONTROLLED VOCABULARY
- b. FULL TEXT INVERSION
- c. STEERING PERMITTED
- d. SYNONYMS
- e. DISPLAY OF RELATED TERMS
- f. CHECKING TERM IN CONTROLLED VOCABULARY

Yes
No
Yes
Yes
Yes
Yes

G. SECURITY PROTECTION

- 1. TERMINAL
- 2. DATA BASE
- 3. RECORD
- 4. FIELD

Yes
Yes
No
No

3. SEARCH SPECIFICATION

- a. MUST NAME FIELDS
- b. MAY LIMIT FIELDS
- c. BOOLEAN AND
- d. BOOLEAN OR
- e. BOOLEAN NOT
- f. NESTING OF BOOLEAN EXPRESSIONS
- g. PHRASE AND DISTANCE SEARCHING
- h. NATURAL ENGLISH
- i. RANGE SEARCHING

Yes
Yes
Yes
Yes
Yes
Yes
No
No
Yes
None

4. TUTORIAL FEATURES

- a. "HELP" COMMAND
- b. DOCUMENTATION ON-LINE

None

5. SEARCH STRATEGY

- a. RANDOM
- b. SEQUENTIAL
- c. INDEXED SEQUENTIAL

No
Yes
Yes

F. REPORT GENERATION

- 1. LANGUAGE TYPE
- a. STANDARD OUTPUT
- b. SELECT AMONG OPTIONS
- c. OWN CODE

Yes
No
Yes

- 2. MEDIA FLEXIBILITY
- a. OFF-LINE PRINTING
- b. DISPLAY OF GRAPHS
- c. SPECIAL OUTPUTS

None
Yes
Yes

3. SPECIAL CAPABILITIES

- a. SORTING
- b. SEQUENCING
- c. COUNTING
- d. ARITHMETIC

Yes
No
Yes
Yes

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
MASTER CONTROL (Version 3)
Information Research Group
Lawrence Livermore Laboratory
University of California
P.O. Box 808
Livermore, California 94550
415-447-1100, X3132
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
Information available on request
AT WHAT COST
No
b. FOR LEASE
AT WHAT COST
Yes
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
Information available on request
AT WHAT COST
Yes
b. DATA BASES
44 major data bases, including
Nuclear Science Abstracts, SPIR,
Chemical Titles, and
Engineering Index
c. TAKES CUSTOMER
DATA BASES
Yes, if programmatically
related to Lawrence Livermore
Laboratory
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
December, 1968
b. SIGNIFICANT
INSTALLATIONS
Lawrence Livermore Laboratory
5. HISTORY OF SERVICE
a. SERVICE INITIATION
December, 1968
b. PRESENT USAGE
1,400 searches per month
6. COMPUTER ENVIRONMENT
1. MAIN FRAME
CDC-6600/7600
2. OPERATING SYSTEM
FROST/FLOE
3. SOURCE LANGUAGE
LALTRAN
4. TERMINAL TYPES
TTY and CRT
5. TRANSMISSION RATES
4800 baud (110 baud with
acoustic couplers)
6. RE-ENTRANT FOR
MULTIPLE USERS
No, not necessary

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
Yes
- D. FILE MAINTENANCE
1. ALLOWS ON-LINE
a. CREATION
Yes
b. UPDATE
Yes
c. DELETION
Yes
d. EDITING
Yes
2. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes
3. OPTIONAL ORDERING OF
ENTERED DATA
Yes
4. AUTOMATIC OR
"MACHINE-AIDED"
CONTENT INDEXING
Optional
- E. QUERY
1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
Yes
b. ENGLISH-LIKE
Yes
c. SYSTEM-FORCED
DIALOGUE
No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
Optional
b. FULL TEXT INVERSION
Yes
c. STEMMING PERMITTED
Yes, also
arbitrary
string
matching
d. SYNONYMS
Yes, if
provided
e. DISPLAY OF
RELATED TERMS
by user
f. CHECKING TERM IN CON-
TROLLED VOCABULARY
Optional

3. SEARCH SPECIFICATION

- a. MUST NAME FIELDS
No
- b. MAY LIMIT FIELDS
Yes
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
Yes
- f. NESTING OF BOOLEAN
EXPRESSIONS
Yes
- g. PHRASE AND DISTANCE
SEARCHING
Open length
phrases,
no distance
searching
No
- h. NATURAL ENGLISH
I. RANGE SEARCHING
Yes
4. TUTORIAL FEATURES
a. "HELP" FORWARD
Some prompting,
error correction
b. DOCUMENTATION
No
c. ON-LINE
Yes
5. SEARCH STRATEGY
a. RANDOM
Yes
b. SEQUENTIAL
Yes, optional
c. INDEXED SEQUENTIAL
Yes, optional
- F. REPORT GENERATION
1. LANGUAGE TYPE
a. STANDARD OUTPUT
No
b. SELECT AMONG
OPTIONS
No
c. OWN CODE
Yes
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
Yes
b. DISPLAY OF GRAPHS
Yes
c. SPECIAL OUTPUTS
Microfiche, 16
and 35 mm film
3. SPECIAL CAPABILITIES
a. SORTING
Yes
b. SEQUENCING
Yes
c. COUNTING
Yes
d. ARITHMETIC
Yes
- G. SECURITY PROTECTION
1. TERMINAL
Yes
2. DATA BASE
Yes
3. RECORD
No
4. FIELD
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME ORIGINATOR

MICROTEXT
"MIRE" Corp.
Bedford, Mass. 01730
Contact: Henry A. Bayard
617-271-2592

TELEPHONE

2. SOFTWARE AVAILABILITY

- FOR PURCHASE
AT WHAT COST
- FOR LEASE
AT WHAT COST

3. SERVICE AVAILABILITY

- SEARCH SERVICE
AT WHAT COST
- DATA BASES
TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE

- FIRST INSTALLATION
SIGNIFICANT
INSTALLATIONS

5. HISTORY OF SERVICE

- SERVICE INITIATION
PRESENT USAGE

B. COMPUTER ENVIRONMENT

1. MAIN FRAME

IBM 360/370 (MICROCENT requires
200K bytes of core)

2. OPERATING SYSTEM

OS/VT with TSO

3. SOURCE LANGUAGE

PL/I

4. TERMINAL TYPES

Any terminals supported by TSO

5. TRANSMISSION RATES

From 10 (teletype) to 800,000
(IBM 3270 displays) cps

6. RE-ENTRANT FOR MULTIPLE USERS

No-reliance on TSO to support
multiple users

C. FILE DEFINITION

1. USER DEFINABLE

Yes

2. VARIABLE LENGTH TEXT

Yes

3. REPEATED FIELDS

Yes

D. FILE MAINTENANCE

- ALLOWS ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING

Yes
Yes
Yes
Yes

2. PREPROGRAMMED DATA

No

3. OPTIONAL ORDERING OF ENTERED DATA

Yes

4. AUTOMATIC OR "ACHINE-AIDED CONTENT INDEXING

No

E. QUERY

1. USER-SYSTEM INTERACTION

- MULTIPLE OPTIONS
AT ANY POINT
b. ENGLISH-LINE
PHRASING
c. SYSTEM-FORCED
DIALOGUE

Yes
Yes
No

2. CONTENT SEARCHING

- CONTROLLED VOCABULARY
b. FULL TEXT INVERSION
c. STEMMING PERMITTED
d. SYNONYMS
e. DISPLAY OF
RELATED TERMS
f. CHECKING TERM IN CON-
TROLLED VOCABULARY

No
Yes
Yes, left,
right, or
both
Yes (user
definable)
No
No

3. SEARCH SPECIFICATION

- "CUT NAME FIELDS
b. "AY LIMIT FIELDS

No
Yes, may
limit to
pre-established
text segments
or to given
lines of text
Yes
Yes
No
Yes
Yes

- BOOLEAN AND
d. BOOLEAN OR
c. BOOLEAN NOT
e. NESTING OF BOOLEAN
EXPRESSORS
g. PHRASE AND DISTANCE
SEARCHING
h. NATURAL ENGLISH
i. RANGE SEARCHING

Yes
Yes
No
No
Yes
Yes
No

4. TUTORIAL FEATURES

- "HELP" COMMAND
b. DOCUMENTATION
ON-LINE

No
Yes
Yes

5. SEARCH STRATEGY

- "RANDOM"
b. SEQUENTIAL
c. INDEXED SEQUENTIAL

No
Yes
No

F. REPORT GENERATION

1. LANGUAGE TYPE

- STANDARD OUTPUT
b. SELECT AMONG
OPTIONS
c. ONE CODE

Yes
No
Yes

2. MEDIA FLEXIBILITY

- OFF-LINE PRINTING
b. DISPLAY OF GRAPHS
c. SPECIAL OUTPUTS

Yes
No
No

3. SPECIAL CAPABILITIES

- SORTING
b. SEQUENCING
c. COUNTING
d. ARITHMETIC

No
No
Yes
No

G. SECURITY PROTECTION

- TERMINAL
2. DATA BASE
3. RECORD
4. FIELD

Provided by TSO
Yes
No
No

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME ORIGINATOR	MINIDATA (for small data bases) United Computing Systems 3130 Broadway Kansas City, Mo. 64106 816-753-4500	1. USER DEFINABLE	Yes	a. MUST NAME FIELDS	Yes
TELEPHONE		2. VARIABLE LENGTH TEXT	No	b. MAY LIMIT FIELDS	Yes
2. SOFTWARE AVAILABILITY	Yes (limited license) Approx. \$10,000	3. REPEATED FIELDS	No	c. BOOLEAN AND	Yes
a. FOR PURCHASE	Yes			d. BOOLEAN OR	Yes
b. AT WHAT COST	Approx. \$400-\$500/mo.			e. BOOLEAN NOT	Yes
3. SERVICE AVAILABILITY	Yes			f. TESTING OF BOOLEAN EXPRESSIONS	Yes
a. SEARCH SERVICE	\$17.50 (10 cps), \$21.00 (30 cps) /connect hour			g. PHRASE AND DISTANCE SEARCHING	No
b. AT WHAT COST	None			h. NATURAL ENGLISH	No
b. DATA BASES	Yes			i. RANGE SEARCHING	Yes
c. TAKES CUSTOMER DATA BASES	Yes				
4. HISTORY OF SOFTWARE	Aug., 1971			4. TUTORIAL FEATURES	None
a. FIRST INSTALLATION	Only UCS			a. "HELP" COMMAND	
b. SIGNIFICANT INSTALLATIONS				b. DOCUMENTATION ON-LINE	
5. HISTORY OF SERVICE	Aug., 1971				
a. SERVICE INITIATION	More than 500 users			5. SEARCH STRATEGY	No
b. PRESENT USAGE				a. RANDOM	Yes
B. COMPUTER ENVIRONMENT				b. SEQUENTIAL	Yes
1. MAIN FRAME	CDC 6000 series			c. INDEXED SEQUENTIAL	No
2. OPERATING SYSTEM	MAX (in-house) or KRONOS (CDC)				
3. SOURCE LANGUAGE	FORTRAN, COMPASS			F. REPORT GENERATION	
4. TERMINAL TYPES	All low speed terminals; CDC 200 USER terminal compatible			1. LANGUAGE TYPE	Yes
5. TRANSMISSION RATES	10-30 cps			a. STANDARD OUTPUT	Yes
6. RE-ENTRANT FOR MULTIPLE USERS	Yes			b. SELECT AMONG OPTIONS	Yes
				c. OWN CODE	Yes
				2. MEDIA FLEXIBILITY	Yes
				a. OFF-LINE PRINTING	Yes
				b. DISPLAY OF GRAPHS	Yes
				c. SPECIAL OUTPUTS	No
				3. SPECIAL CAPABILITIES	Yes
				a. SORTING	No
				b. SEQUENCING	No
				c. COUNTING	Yes
				d. ARITHMETIC	Yes
				C. SECURITY PROTECTION	
				1. TERMINAL	Yes
				2. DATA BASE	Yes
				3. RECORD	No
				4. FIELD	No

E. QUERY	No
1. USER-SYSTEM INTERACTION	Yes
a. MULTIPLE OPTIONS	Yes
b. AT ANY POINT	Yes
c. ENGLISH-LIKE PHRASING	Limited
d. SYSTEM-FORCED DIALOGUE	None
2. CONTENT SEARCHING	None
a. CONTROLLED VOCABULARY	
b. FULL TEXT INVERSION	
c. STEMMING PERMITTED	
d. SYNONYMS	
e. DISPLAY OF RELATED TERMS	
f. CHECKING TERM IN CONTROLLED VOCABULARY	

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
WIRADS
Data Center Division
NASA
Marshall Space Flight Center,
Alabama 35812
205-453-1205 (technical)
205-453-4181 (administrative)
2. SOFTWARE AVAILABILITY
Available through COSMIC
(Computer Software Management
and Information Center at the
University of Georgia)
3. SERVICE AVAILABILITY
Not generally available
a. SEARCH SERVICE
AT WHAT COST
b. DATA BASES
c. TAKES CUSTOMER
DATA BASES
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
late 1971
b. SIGNIFICANT
INSTALLATIONS
Federal Communication
Commission, University of
Alabama, Huntsville
5. HISTORY OF SERVICE
a. SERVICE INITIATION
b. PRESENT USAGE
NA
6. COMPUTER ENVIRONMENT
a. MAIN FRAME
UNIVAC 1108
b. OPERATING SYSTEM
EXPC 8
c. SOURCE LANGUAGE
80% COBOL, 19% FORTRAN, 1%
Assembler
d. TERMINAL TYPES
UNISCOPE CRT, DCT 500 hard
copy, DCT 2000, TTY, UNIVAC
9300, UNIVAC 1004
e. TRANSMISSION RATES
Device dependent
f. RE-ENTRANT FOR
MULTIPLE USERS
No

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
Yes, abstract
length only
Yes
3. REPEATED FIELDS
- D. FILE MAINTENANCE
a. CREATION
Yes
b. UPDATE
Yes
c. DELETION
Yes
d. EDITING

2. PREPROGRAMMED DATA VALIDATION CHECKS

- Yes
- Yes, for
records in
file but not
fields within
record
- No

3. OPTIONAL ORDERING OF ENTERED DATA

4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING

F. QUERY

1. USER-SYSTEM INTERACTION:

- a. MULTIPLE OPTIONS
AT ANY POINT
No
- b. ENGLISH-LIKE
PHRASING
Yes
- c. SYSTEM-FORCED
DIALOGUE
Yes

2. CONTENT SEARCHING

- a. CONTROLLED VOCABULARY
Open-ended
- b. FULL TEXT INVERSION
No
- c. STEMMING PERMITTED
or portion of
a word
Yes
- d. SYNONYMS
Yes
- e. DISPLAY OF
RELATED TERMS
No
- f. CHECKING TERM IN CON-
TROLLED VOCABULARY
Yes

3. SEARCH SPECIFICATION:

- a. MUST HAVE FIELDS
Yes
- b. MAY LIMIT FIELDS
Yes
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
Yes
- f. NESTING OF BOOLEAN
EXPRESSIONS
Yes, to
level 3
- g. PHRASE AND DISTANCE
SEARCHING
No
- h. NATURAL ENGLISH
Yes
- i. RANGE SEARCHING
Yes

4. TUTORIAL FEATURES

- a. "HELP" COMMAND
None
- b. DOCUMENTATION
ON-LINE

5. SEARCH STRATEGY

- a. RANDOM
Yes (inverted
list)
Yes
- b. SEQUENTIAL
Yes
- c. INDEXED SEQUENTIAL

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT
Yes
- b. SELECT AMONG
OPTIONS
Yes
- c. PAGE CODE
Yes

2. MEDIA FLEXIBILITY

- a. OFF-LINE PRINTING
Yes
- b. DISPLAY OF GRAPHIC
Yes
- c. SPECIAL OUTPUTS
Yes, magnetic
tape

3. SPECIAL CAPABILITIES

- a. SORTING
Yes
- b. SEQUENCING
No
- c. COUNTING
Yes
- d. ARITHMETIC
Yes

G. SECURITY PROTECTION

1. TERMINAL
Yes
2. DATA BASE
Yes
3. RECORD
Yes
4. FIELD
Yes

A. GENERAL DESCRIPTION:

1. SYSTEM NAME
ORIGINATOR

"MST"
Meta Language Products Inc.
635 E 14 Street Apt 9-4
New York, New York, 10009
212-477-4074
Contact: George Potts

TELEPHONE:

2. SOFTWARE AVAILABILITY

- a. FOR PURCHASE Yes
b. AT WHAT COST Negotiable
c. FOR LEASE Yes
d. AT WHAT COST Negotiable

3. SERVICE AVAILABILITY

Software service has been available on TymeShare

a. SEARCH SERVICE

- AT WHAT COST
b. DATA BASES
c. TAKES CUSTOMER DATA BASES

4. HISTORY OF SOFTWARE

- a. FIRST INSTALLATION Installed briefly at Department of Commerce. No current installations.
b. SIGNIFICANT INSTALLATIONS Xerox Corp.

5. HISTORY OF SERVICE

- a. SERVICE INITIATION NA
b. PRESENT USAGE

B. COMPUTER ENVIRONMENT

1. "MST" PDP-11 XDS-940
2. OPERATING SYSTEM 940 Time-sharing System
3. SOURCE LANGUAGE ARPAS - assembly language for 940
4. TERMINAL TYPES Any TTY compatible terminal
5. TRANSMISSION RATES 10, 15, 30 cps
6. REPLACEMENT FOR MULTIPLE USERS Yes

3. SEARCH SPECIFICATION Natural language

a. BEST HIT FILES No

b. BY LIST FILES No

c. BY INDEX FILES Yes

d. BY INDEX OR Yes

e. BY INDEX OR Yes

f. BY INDEX OR Yes

g. BY INDEX OR Yes

h. BY INDEX OR Yes

i. BY INDEX OR Yes

j. BY INDEX OR Yes

k. BY INDEX OR Yes

l. BY INDEX OR Yes

m. BY INDEX OR Yes

n. BY INDEX OR Yes

o. BY INDEX OR Yes

p. BY INDEX OR Yes

q. BY INDEX OR Yes

r. BY INDEX OR Yes

s. BY INDEX OR Yes

t. BY INDEX OR Yes

u. BY INDEX OR Yes

v. BY INDEX OR Yes

w. BY INDEX OR Yes

x. BY INDEX OR Yes

y. BY INDEX OR Yes

z. BY INDEX OR Yes

aa. BY INDEX OR Yes

ab. BY INDEX OR Yes

ac. BY INDEX OR Yes

ad. BY INDEX OR Yes

ae. BY INDEX OR Yes

af. BY INDEX OR Yes

ag. BY INDEX OR Yes

ah. BY INDEX OR Yes

ai. BY INDEX OR Yes

aj. BY INDEX OR Yes

ak. BY INDEX OR Yes

al. BY INDEX OR Yes

am. BY INDEX OR Yes

an. BY INDEX OR Yes

ao. BY INDEX OR Yes

ap. BY INDEX OR Yes

aq. BY INDEX OR Yes

ar. BY INDEX OR Yes

as. BY INDEX OR Yes

at. BY INDEX OR Yes

au. BY INDEX OR Yes

av. BY INDEX OR Yes

aw. BY INDEX OR Yes

ax. BY INDEX OR Yes

ay. BY INDEX OR Yes

az. BY INDEX OR Yes

ba. BY INDEX OR Yes

bb. BY INDEX OR Yes

bc. BY INDEX OR Yes

bd. BY INDEX OR Yes

be. BY INDEX OR Yes

bf. BY INDEX OR Yes

bg. BY INDEX OR Yes

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
TELEPHONE

2. SOFTWARE AVAILABILITY

a. FOR PURCHASE
AT WHAT COST

b. FOR LEASE
AT WHAT COST

3. SERVICE AVAILABILITY

a. SEARCH SERVICE
AT WHAT COST

b. DATA BASES

c. TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE

a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS

5. HISTORY OF SERVICE

a. SERVICE INITIATION
b. PRESENT USAGE

B. COMPUTER ENVIRONMENT

1. MAIN FRAME

2. OPERATING SYSTEM

3. SOURCE LANGUAGE

4. TERMINAL TYPES

5. TRANSMISSION RATES

6. RE-ENTRANT FOR MULTIPLE USERS

MASIS
Computing Services Division
NASA, Lewis Research Center
Cleveland, Ohio 44135
216-433-4000, X795

Yes
Available to government
agencies
No

No
NA
No

September 1970
Carnegie Mellon University

NA

IBM 360 or 370

OS/VT

Mostly PL/1, some Assembler

IBM 2741/1050 and TTY
compatible devices

110, 150, 300 or 1200 baud

Yes

C. FILE DEFINITION

1. USER DEFINABLE

2. VARIABLE LENGTH TEXT

3. REPEATED FIELDS

D. FILE MAINTENANCE

1. ALLOWS ON-LINE

a. CREATION

b. UPDATE

c. DELETION

d. EDITING

2. PREPROGRAMMED DATA VALIDATION CHECKS

3. OPTIONAL ORDERING OF
ENTERED DATA

4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING

E. QUERY

1. USER-SYSTEM INTERACTION

a. MULTIPLE OPTIONS

b. AT ANY POINT

c. ENGLISH-LIKE
PHRASING

d. SYSTEM-FORCED
DIALOGUE

2. CONTENT SEARCHING

a. CONTROLLED VOCABULARY

b. FULL TEXT INVERSION

c. STEMMING PERMITTED

d. SYNONYMS

e. DISPLAY OF
RELATED TERMS

f. CHECKING TERM IN CON-
TROLLED VOCABULARY

3. SEARCH SPECIFICATION

a. MUST NAME FIELDS

b. MAY LIMIT FIELDS

c. BOOLEAN AND

d. BOOLEAN OR

e. BOOLEAN NOT

f. NESTING OF BOOLEAN
EXPRESSIONS

g. TRACE AND DISTANCE
SEARCHING

h. NATURAL ENGLISH

i. RANGE SEARCHING

4. TUTORIAL FEATURES

a. "HELP" COMMAND

b. DOCUMENTATION
ON-LINE

5. SEARCH STRATEGY

a. RANDOM

b. SEQUENTIAL

c. INDEXED SEQUENTIAL

F. REPORT GENERATION

1. LANGUAGE TYPE

a. STANDARD OUTPUT

b. SELECT AMONG
OPTIONS

c. OWN CODE

2. MEDIA FLEXIBILITY

a. OFF-LINE PRINTING

b. DISPLAY OF GRAPHS

c. SPECIAL OUTPUTS

3. SPECIAL CAPABILITIES

a. SORTING

b. SEQUENCING

c. COUNTING

d. ARITHMETIC

G. SECURITY PROTECTION

1. TERMINAL

2. DATA BASE

3. RECORD

4. FIELD

Yes

Yes

Yes

Yes

Yes

Yes

No

No

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No

Not on-line

Yes

Yes

Yes

No

No

Yes

Yes

Yes

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME	THE NEW YORK TIMES INFORMATION BANK	1. USER DEFINABLE	No	a. MUST NAME FIELDS	No
ORIGINATOR	Information Services Division The New York Times 229 West 43rd St. New York, N.Y. 10036 212-556-1031	2. VARIABLE LENGTH TEXT	Yes	b. "AY" LIMIT FIELDS	Yes
TELEPHONE		3. REPEATED FIELDS	Yes, for index terms and certain bibliographic elements	c. BOOLEAN OR	Yes
2. SOFTWARE AVAILABILITY	No	D. FILE MAINTENANCE		d. BOOLEAN NOT	Yes
a. FOR PURCHASE AT WHAT COST	Planned for future.	1. ALLOWS ON-LINE	Yes, to establish temporary file; permanent file established via later batch run	e. NESTING OF BOOLEAN EXPRESSIONS	No
b. FOR LEASE AT WHAT COST		a. CREATION	Yes, in temporary file	9. PHRASE AND DISTANCE SEARCHING	No
3. SERVICE AVAILABILITY		b. UPDATE	Yes, in temporary file	h. NATURAL ENGLISH	No
a. SEARCH SERVICE AT WHAT COST	Yes \$675 per month minimum, exclusive of equipment. Abstracts of New York Times articles (1970 to present) plus selected abstracts from other sources	c. DELETION	Yes	i. FORCE SEARCHING	Yes, for date of publication
b. DATA BASES	Not at present	d. EDITING		4. TUTORIAL FEATURES	Not needed because of tutorial sequence
c. TAKES CUSTOMER DATA BASES	NA	2. PREPROGRAMMED DATA VALIDATION CHECKS	No, with certain exceptions	a. "HELP" COMMAND	Yes, with abbreviation optional
4. HISTORY OF SOFTWARE		3. OPTIONAL ORDERING OF ENTERED DATA	Not relevant to users	b. DOCUMENTATION ON-LINE	Yes
a. FIRST INSTALLATION	Late 1972	4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No	5. SEARCH STRATEGY	No
b. SIGNIFICANT INSTALLATIONS	64 in-house terminals. Around 15 outside subscribers, including Department of State, Library of Congress, and University of Pittsburgh	E. QUERY		a. RANDOM	Yes
5. HISTORY OF SERVICE		1. USER-SYSTEM INTERACTION		b. SEQUENTIAL	No
a. SERVICE INITIATION	IBM 370/145	a. MULTIPLE OPTIONS	Yes	c. INDEXED SEQUENTIAL	Yes
b. PRESENT USAGE	DOS	b. AT ANY POINT	Yes	F. REPORT GENERATION	
B. COMPUTER ENVIRONMENT		c. ENGLISH-LIKE PHRASING	Yes, except when entering search terms	1. LANGUAGE TYPE	Yes
1. MAIN FRAME	PL/1, IBM 370 BAL, COBOL	d. SYSTEM-FORCED DIALOGUE	Yes, open-ended vocabulary now contains about 200,000 terms	a. STANDARD OUTPUT	Yes
2. OPERATING SYSTEM	IncoTerm SPD-10/20 CRT terminal for outside subscribers	2. CONTENT SEARCHING		b. SELECT AMONG OPTIONS	Yes
3. SOURCE LANGUAGE	2000 or 2400 bps	a. CONTROLLED VOCABULARY		c. OWN CODE	No
4. TERMINAL TYPES	Yes	b. FULL TEXT INVERSION	No	2. MEDIA FLEXIBILITY	Yes
5. TRANSMISSION RATES		c. STEMMING PERMITTED	Yes	a. OFF-LINE PRINTING	No
6. RE-ENTRANT FOR MULTIPLE USERS		d. SYNONYMS	Yes	b. DISPLAY OF GRAPHS	Yes, microfilm, microfiche
		e. DISPLAY OF RELATED TERMS	Yes	c. SPECIAL OUTPUTS	Yes, by date
		f. CHECKING TERM IN CONTROLLED VOCABULARY	Yes	3. SPECIAL CAPABILITIES	Yes
				a. SORTING	Yes
				b. SEQUENCING	Yes
				c. COUNTING	No
				d. ARITHMETIC	No
				G. SECURITY PROTECTION	
				1. TERMINAL	Yes
				2. DATA BASE	Yes
				3. PROCOF	No
				4. FIELD	No

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR

OLIVER
On-line Systems, Inc.
115 Evergreen Heights Dr.
Pittsburgh, Pa. 15229
412-931-7600

TELEPHONE

2. SOFTWARE AVAILABILITY By arrangement

- a. FOR PURCHASE
AT WHAT COST
b. FOR LEASE
AT WHAT COST

3. SERVICE AVAILABILITY

- a. SEARCH SERVICE
AT WHAT COST
Yes
\$10.00/connect hour
+ \$0.05/computer processing
unit
Standard & Poor's Daily Report
Yes
NA
- b. DATA BASES
c. TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE

- a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS

5. HISTORY OF SERVICE

- a. SERVICE INITIATION
b. PRESENT USAGE
1970
About 50 companies, 10-20 users
each

B. COMPUTER ENVIRONMENT

1. MAIN FRAME

DECSystem 10

2. OPERATING SYSTEM

TOPS-10 Monitor (variant)

3. SOURCE LANGUAGE

MACRO-10 (assembler)

4. TERMINAL TYPES

TTY-compatible, 2741-compatible

5. TRANSMISSION RATES

10-120 cps

6. PARTICIPANT FOR
MULTIPLE USERS

Yes

C. FILE DEFINITION

1. USER DEFINABLE Yes
2. VARIABLE LENGTH TEXT Yes
3. REPEATED FIELDS Yes

D. FILE MAINTENANCE

1. ALLOWS ON-LINE
a. CREATION Yes
b. UPDATE Yes
c. DELETION Yes
d. EDITING Yes

2. PREPROGRAMMED DATA
VALIDATION CHECKS Yes

3. OPTIONAL ORDERING OF
ENTERED DATA

New records are
appended or else
go into holes
left by deletions

4. AUTOMATIC OR
MANUAL-AIDED
CONTENT INDEXING No

E. QUERY

1. USER-SYSTEM INTERACTION

- a. MULTIPLE OPTIONS No
b. ENGLISH-LINE Yes
c. SYSTEM-FORCED
DIALOGUE Yes

2. CONTENT SEARCHING

- a. CONTROLLED VOCABULARY No
b. FULL TEXT INVERSION No
c. STEMMING PERMITTED Yes; also embedded
string searching
d. SYNONYMS Yes
e. DISPLAY OF
RELATED TERMS No
f. CHECKING TERM IN CON-
TROLLED VOCABULARY NA

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
ORBIT III
System Development Corp.
2500 Colorado Ave.
Santa Monica, Calif. 90406
TELEPHONE
213-393-9411

2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
b. AT WHAT COST
c. FOR LEASE
d. AT WHAT COST
Yes
\$47,500
Yes
\$950 per month plus \$2,000
startup charges

3. SERVICE AVAILABILITY
a. SEARCH SERVICE
b. AT WHAT COST
c. DATA BASES
Yes
\$22.00 to \$35.00 per hour.
ERIC, CA Condensates, and CAIN
MEDLINE available to a
restricted customer set.

c. TAKES CUSTOMER
DATA BASES
Yes

4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
b. SIGNIFICANT
c. INSTALLATIONS
1970
National Library of Medicine,
SBC, Carolinska Institute of
Stockholm, Dept. State, SUNY
(Syracuse)

5. HISTORY OF SERVICE
a. SERVICE INITIATION
b. PRESENT USAGE
1972
Over 50 organizations

B. COMPUTER ENVIRONMENT

1. MAIN FRAME
IBM Series 360, 370
2. OPERATING SYSTEM
OS/WT, OS/WT, VS/2
3. SOURCE LANGUAGE
PL/1
4. TERMINAL TYPES
TTY, IBM 2741, and others
5. TRANSMISSION RATES
10, 15, 30 gps
6. RE-ENTRANT FOR
MULTIPLE USERS
Yes

C. FILE DEFINITION

1. USER DEFINABLE
Yes, with
assistance
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
Yes

3. FILE MAINTENANCE
a. ALLOWS ON-LINE
b. CREATION
c. UPDATE
d. DELETION
e. EDITING
No
Yes
Yes
Yes

2. PREPROGRAMMED DATA
VALIDATION CHECKS
3. OPTIONAL ORDERING OF
ENTERED DATA
No
No

4. AUTOMATIC OR
MANUAL INDEXING
Yes, via an
optional
separate
package

E. QUERY

1. USER-SYSTEM INTERACTION:
a. "MULTIPLE OPTIONS"
b. ENGLISH-LINE
PHRASING
c. SYSTEM-FORCED
DIALOGUE
Yes
Yes
No

2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
b. FULL TEXT INVERSION
c. STEMMING PERMITTED
d. SYNONYMS
Yes, if user
supplied
No
Yes, if
established
at file
creation
Yes, with
special
programming
Yes, if user
supplied

e. DISPLAY OF
RELATED TERMS
f. CHECKING TERM IN CON-
TROLLED VOCABULARY

3. SEARCH SPECIFICATION:

a. MUST HAVE FIELDS
b. MAY LIMIT FIELDS
c. BOOLEAN AND
d. BOOLEAN OR
e. BOOLEAN NOT
f. NESTING OF BOOLEAN
EXPRESSIONS
g. PHRASE AND DISTANCE
h. SEARCHING
i. RANGE SEARCHING
Yes
No
No
Yes, for one
category
Yes
Yes
Yes

4. TUTORIAL FEATURES
a. "HELP" COMMAND
b. DOCUMENTATION
ON-LINE
Yes
Yes
Yes

5. SEARCH STRATEGY
a. RANDOM
b. SEQUENTIAL
c. INDEXED SEQUENTIAL
Yes
No
No

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT
b. SELECT AMONG
OPTIONS
c. ONE CODE
Yes
Yes
Yes
No

2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
b. DISPLAY OF GRAPHS
c. SPECIAL OUTPUTS
Yes
No
No

3. SPECIAL CAPABILITIES
a. SORTING
b. SOUNDING
c. COUNTING
d. ARITHMETIC
No
Yes
Yes, for number
of hits
No

G. SECURITY PROTECTION:

1. TERMINAL
2. DATA BASE
3. RECORD
4. FIELD
No
Yes
Yes, using
security at
print level
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME:
ORIGINATOR
PIRMS (Pittsburgh Information Retrieval System)
Knowledge Availability Systems Center
University of Pittsburgh
Pittsburgh, Pa. 15213
Contacts: Mr. Edmund Howie,
Prof. Dale Isner (system designer)
412-624-5211
- TELEPHONE
412-624-5211
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
AT WHAT COST
b. FOR LEASE
AT WHAT COST
A copy of the program and of the documentation are available for reproduction costs.
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
AT WHAT COST
b. DATA BASES
c. TAKES CUSTOMER
DATA BASES
Search services on approximately 10 data bases are available. For prices, contact Associate Director of EASC.
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS
Only implemented at Pittsburgh
5. HISTORY OF SERVICE
a. SERVICE INITIATION
b. PRESENT USAGE
Aug., 1972
U. of Pitt. campus + over 100 outside clients
6. COMPUTER ENVIRONMENT
1. MAIN FRAME
PDP10
2. OPERATING SYSTEM
TSM
3. SOURCE LANGUAGE
MACRO-10
4. TERMINAL TYPES
ASR-33 TTY compatible
5. TRANSMISSION RATES
10-30 cps.
6. PE-ENTRANT FOR
MULTIPLE USERS
Yes

- C. FILE DEFINITION
1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
Yes
D. FILE MAINTENANCE
1. ALLOWS ON-LINE
a. CREATION
Yes, by conversion of (card or text) input file
b. UPDATE
Yes, source file
c. DELETION
Yes, source file
d. EDITING
Yes, source file
2. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes
3. OPTIONAL ORDERING OF
ENTERED DATA
No
4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
No (full text inversion for search on words and phrases)
E. QUERY
1. USPR-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
b. AT ANY POINT
c. ENGLISH-LIKE
PHRASING
d. SYSTEM-FORCED
DIALOGUE
Yes, via system controlled dialogue
Yes
Yes
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
b. FULL TEXT INVERSION
c. STEERING PERMITTED
d. SYNONYMS
e. DISPLAY OF
RELATED TERMS
f. CHECKING TERM IN CON-
TROLLED VOCABULARY
No
Yes
Yes (truncation)
No
No
No
F. REPORT GENERATION
1. LANGUAGE TYPE
a. STANDARD OUTPUT
b. SELECT AMONG
OPTIONS
c. OWN CODE
Yes
Yes
Yes
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
b. DISPLAY OF GRAPHIC
c. SPECIAL OUTPUT
Yes
No
No
3. SPECIAL CAPABILITIES
a. SORTING
b. SEQUENCING
c. COUNTING
d. ARITHMETIC
No
No
Yes
No
G. SECURITY PROTECTION
1. TERMINAL
2. DATA BASE
3. RECORD
4. FIELD
Yes
Yes
No
No
3. SEARCH SPECIFICATION
a. MUST HAVE FIELDS
b. MAY LIMIT FIELDS
c. BOOLEAN AND
d. BOOLEAN OR
e. BOOLEAN NOT
f. TESTING OF WORDS
g. EXPRESSIONS
h. PHRASE AND DISTANCE
SEARCHING
No
Yes
Yes
Yes
No
Yes
Yes (phrases,
clauses)
4. TUTORIAL FEATURES
a. "HELP" COMMAND
b. DOCUMENTATION
ON-LINE
No
Yes, via separate tutorial package
5. SEARCH STRATEGY
a. "RANDOM"
b. SEQUENTIAL
c. INDEXED SEQUENTIAL
No
Yes
Yes
No
F. REPORT GENERATION
1. LANGUAGE TYPE
a. STANDARD OUTPUT
b. SELECT AMONG
OPTIONS
c. OWN CODE
Yes
Yes
Yes
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
b. DISPLAY OF GRAPHIC
c. SPECIAL OUTPUT
Yes
No
No
3. SPECIAL CAPABILITIES
a. SORTING
b. SEQUENCING
c. COUNTING
d. ARITHMETIC
No
No
Yes
No
G. SECURITY PROTECTION
1. TERMINAL
2. DATA BASE
3. RECORD
4. FIELD
Yes
Yes
No
No

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME	QUERY UPDATE (version 1)		Uses files prepared externally	a. MUST NAME FIELDS	Yes
ORIGINATOR	Control Data Corp.	1. USER DEFINABLE		b. MAX LIMIT FIELDS	Yes
TELEPHONE	5272 River Rd.	2. VARIABLE LENGTH TEXT	Via a separate program	c. BOOLEAN AND	Yes
	Washington, D.C. 20016	3. REPEATED FIELDS	Yes	d. BOOLEAN OR	Yes
	301-652-2268	D. FILE MAINTENANCE		e. BOOLEAN NOT	No (Exclusive OR instead)
2. SOFTWARE AVAILABILITY	No	1. ALLOWS ON-LINE		f. TESTING OF BOOLEAN EXPRESSIONS	Yes
a. FOR PURCHASE AT WHAT COST	Yes	a. CREATION	No (see C.)	g. PHRASE AND DISTANCE SEARCHING	No
b. FOR LEASE AT WHAT COST	\$100/mo. royalty	b. UPDATE	Yes	h. NATURAL ENGLISH	No
3. SERVICE AVAILABILITY	NA	c. DELETION	Yes	i. RANGE SEARCHING	Yes
a. SEARCH SERVICE AT WHAT COST		d. EDITING		4. TUTORIAL FEATURES	
b. DATA BASES		2. PREPROGRAMMED DATA VALIDATION CHECKS	Yes	a. "HELP" COMMAND	Yes
c. TAKES CUSTOMER DATA BASES		3. OPTIONAL ORDERING OF ENTERED DATA	Yes	b. DOCUMENTATION ON-LINE	Yes
4. HISTORY OF SOFTWARE	late 1972	4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No	5. SEARCH STRATEGY	
a. FIRST INSTALLATION	No extensive use yet	5. QUERY		a. RANDOM	Yes
b. SIGNIFICANT INSTALLATIONS		1. USER-SYSTEM INTERACTION		b. SEQUENTIAL	Yes
5. HISTORY OF SERVICE	NA	a. MULTIPLE OPTIONS AT ANY POINT	Yes	c. INDEXED SEQUENTIAL	Yes
a. SERVICE INITIATION		b. ENGLISH-LIKE PHRASING	Yes	F. REPORT GENERATION	
b. PRESENT USAGE		c. SYSTEM-FORCED DIALOGUE	No	1. LANGUAGE TYPE	
B. COMPUTER ENVIRONMENT		2. CONTENT SEARCHING		a. STANDARD OUTPUT	Yes
1. MAIN FRAME	CDC CYBER/70, 6000 series	a. CONTROLLED VOCABULARY	None	b. SELECT AMONG OPTIONS	No
2. OPERATING SYSTEM	SCOPE 3, INTERCOM 3	b. FULL TEXT INVERSION		c. OWN CODE	No
3. SOURCE LANGUAGE	SYNPL	c. STEERING PERMITTED		2. MEDIA FLEXIBILITY	None
4. TERMINAL TYPES	TTY 33, 35; CRT	d. SYNONYMS		a. OFF-LINE PRINTING	
5. TRANSMISSION RATES	10-30 cps, 100 cps, 2400 baud	e. DISPLAY OF RELATED TERMS		b. DISPLAY OF GRAPHS	
6. RE-ENTRANT FOR MULTIPLE USERS	No	f. CHECKING TERM IN CONTROLLED VOCABULARY		c. SPECIAL OUTPUTS	
				3. SPECIAL CAPABILITIES	
				a. SORTING	Yes
				b. SEQUENCING	No
				c. COUNTING	Yes
				d. ARITHMETIC	Yes
				G. SECURITY PROTECTION	
				1. TERMINAL	Yes
				2. DATA BASE	Yes
				3. RECORD	No
				4. FIELD	No

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME ORIGINATOR		1. USER DEFINABLE		a. MUST HAVE FIELDS	
TELEPHONE		2. VARIABLE LENGTH TEXT		b. MAY LIMIT FIELDS	
2. SOFTWARE AVAILABILITY		3. REPEATED FIELDS		c. BOOLEAN AND	
a. FOR PURCHASE		D. FILE MAINTENANCE		d. BOOLEAN OR	
b. FOR LEASE		1. ALLOWS ON-LINE		e. BOOLEAN NOT	
c. TAKES CUSTOMER		a. CREATION		f. MIXING OF BOOLEAN	
d. DATA BASES		b. UPDATE		g. EXPRESSIONS	
e. SIGNIFICANT		c. DELETION		h. PHRASE AND DISTANCE	
f. INSTALLATIONS		d. EDITING		i. SEARCHING	
3. SERVICE AVAILABILITY		2. PREPROGRAMMED DATA		j. NATURAL ENGLISH	
a. FIRST INSTALLATION		VALIDATION CHECKS		k. RANGE SEARCHING	
b. PRESENT USAGE		3. OPTIONAL ORDERING OF		4. TUTORIAL FEATURES	
c. COMPUTER ENVIRONMENT		ENTERED DATA		a. "HELP" COMMAND	
1. MAIN FRAME		4. AUTOMATIC OR		b. DOCUMENTATION	
2. OPERATING SYSTEM		"MACHINE-AIDED		ON-LINE	
3. SOURCE LANGUAGE		CONTENT INDEXING		5. SEARCH STRATEGY	
4. TERMINAL TYPES		E. QUERY		a. RANDOM	
5. TRANSMISSION RATES		1. USER-SYSTEM INTERACTION		b. SEQUENTIAL	
6. RE-ENTRANT FOR		a. MULTIPLE OPTIONS		c. INDEXED SEQUENTIAL	
MULTIPLE USERS		b. AT ANY POINT		F. REPORT GENERATION	
		c. ENGLISH-LIKE		1. LANGUAGE TYPE	
		d. PHRASING		a. STANDARD OUTPUT	
		e. SYSTEM-FORCED		b. SELECT AMONG	
		f. DIALOGUE		c. OWN CODE	
		2. CONTENT SEARCHING		2. TOTAL FLEXIBILITY	
		a. CONTROLLED VOCABULARY		a. OFF-LINE PRINTING	
		b. FULL TEXT INVERSION		b. DISPLAY OF GRAPHS	
		c. SPELLING PERMITTED		c. SPECIAL OUTPUTS	
		d. SYNONYMS		3. SPECIAL CAPABILITIES	
		e. DISPLAY OF		a. SORTING	
		f. CHECKING TERM IN CON-		b. SEQUENCING	
		TROLLED VOCABULARY		c. COUNTING	
				d. ARITHMETIC	
				G. SECURITY PROTECTION	
				1. TERMINAL	
				2. DATA BASE	
				3. RECORD	
				4. FIELD	

A. GENERAL DESCRIPTION

1. SYSTEM NAME
RECON/STIMS, JURIS, ENVIRON,
TOXICON (same system);
Lockheed's DIALOG is
technically the same.
NASA
Science & Tech. Information
Division
Washington, D.C.
301-755-3465
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
Available via COMMIC. Extended
version available by late 1973
b. AT WHAT COST
c. FOR LEASE
d. AT WHAT COST
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
No, in-house services only at
government agencies; NLM
service publicly available at
special centers.
b. DATA BASES
NLM (TOXICON) has CDAC,
Toxicity Bibliography; NASA has
STAR, IAA; Justice (JURIS) has
JURIS data base;
Yes (with help from a
contractor)
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
1967 for NASA
b. SIGNIFICANT
NASA, NLM, Justice, AEC, EPA,
Federal Radiation and
Conciliation Service
5. HISTORY OF SERVICE
a. SERVICE INITIATION
NA
b. PRESENT USAGE
IBM 360/50
OS/MT and TPT
6. COMPUTER ENVIRONMENT
1. MAIN FRAME
2. OPERATING SYSTEM
RECON (the interactive
subsystem) is all assembler;
STIMS (the batch file
maintenance subsystem) is PL/I
+ assembler.
3. SOURCE LANGUAGE
ASCII compatible terminals, IBM
2260, Bunker Ramo 2200, and TTY
compatible
10-300 cps
NO
7. TERMINAL TYPES
8. TRANSMISSION RATES
9. RE-ENTRANT FOR
MULTIPLE USERS

C. FILE DEFINITION

1. USER DEFINABLE
No
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
Yes
4. FILE MAINTENANCE
None
5. ALLOWS ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING
Yes
6. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes
7. OPTIONAL ORDERING OF
ENTERED DATA
Yes
8. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
No
9. QUERY
1. USER-SYSTEM INTERACTION:
a. MULTIPLE OPTIONS
AT ANY POINT
Yes
b. ENGLISH-LIKE
PHRASING
Yes
c. SYSTEM-FORCED
DIALOGUE
No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
Yes
b. FULL TEXT INTERVIEW
Yes
c. STEERING PERMITTED
Yes
d. SYNONYMS
Yes, via
e. DISPLAY OF
RELATED TERMS
EXPAND
f. CHECKING TERM IN CON-
TROLLED VOCABULARY
Yes

3. SEARCH SPECIFICATION:

- a. MUST NAME FIELDS
No
b. MAY LIMIT FIELDS
Yes
c. BOOLEAN AND
/d. BOOLEAN OR
Yes
e. BOOLEAN NOT
Yes
f. LISTING OF BOOLEAN
EXPRESSIONS
Yes
g. PHRASE AND DISTANCE
SEARCHING
Yes
h. NATURAL ENGLISH
1. RANGE SEARCHING
Yes
2. TUTORIAL FEATURES
Yes, via
a. "HELP" COMMAND
EXPLAIN
b. DOCUMENTATION:
ON-LINE
Yes
3. SEARCH STRATEGY
a. RANDOM
No
b. SEQUENTIAL
No
c. INDEXED SEQUENTIAL
Yes
4. REPORT GENERATION:
1. LANGUAGE TYPE
a. STANDARD OUTPUT
Yes
b. SELECT AMONG
OPTIONS
Yes
c. ON-LINE CODE
No
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
Yes
b. DISPLAY OF GRAPHS
No
c. SPECIAL OUTPUTS
No
3. SPECIAL CAPABILITIES
a. SORTING
Yes
b. SEQUENCING
No
c. COCHING
Yes
d. ARITHMETIC
No
4. SECURITY PROTECTION
1. TERMINAL
Yes
2. DATA BASE
Yes
3. RECORD
No
4. FIELD
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
RPI (Remote File Inquiry System)
NASA
John F. Kennedy Space Center
Automatic Data Processing Center
Kennedy Space Center, Fla.
32899
305-867-4166
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
AT WHAT COST
b. FOR LEASE
AT WHAT COST
Available to government agencies
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
b. DATA BASES
No, in-house use only
NASA technical data on parts reliability, financial management, master personnel, etc.
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
b. SIGNIFICANT INSTALLATIONS
NA
1969
NASA Headquarters, NASA Space Center
5. HISTORY OF SERVICE
a. SERVICE INITIATION
b. PRESENT USAGE
1969
See 4.b.; supplied to Army Safeguard Command and House of Representatives, but usage there unknown
6. COMPUTER ENVIRONMENT
a. MAIN FRAME
b. OPERATING SYSTEM
c. SOURCE LANGUAGE
d. TERMINAL TYPES
e. TRANSMISSION RATES
f. RE-ENTRANT FOR MULTIPLE USERS
Minimum 360/40
OS/VT (OTAM), MVT at NASA Headquarters
Assembler (level P)
TTY compatible
110 baud
Yes

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
Yes
4. MAINTENANCE
a. ALLOWS ON-LINE
b. CREATION
c. UPDATE
d. DELETION
e. EDITING
Yes
Yes
Yes
Yes
Yes
5. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes
6. OPTIONAL ORDERING OF ENTERED DATA
Yes
7. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING
No

E. QUERY

1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
b. ENGLISH-LIKE PHRASING
c. SYSTEM-FORCED DIALOGUE
No
Yes
No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
b. FULL TEXT INVERSION
c. STEMMING PERMITTED
d. SYNONYMS
e. DISPLAY OF RELATED TERMS
f. CHECKING TERM IN CONTROLLED VOCABULARY
Yes
No
No
Yes, of keywords
No
No

3. SEARCH SPECIFICATION:

- a. MUST HAVE FIELDS
Yes
- b. MAY LIMIT FIELDS
--
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
Yes
- f. MIXING OF BOOLEAN EXPRESSIONS
Yes
- g. PHRASE AND DISTANCE
Yes
- h. SEARCHING
No
- i. NATURAL ENGLISH
Yes
- j. LARGE SEARCHING
Yes
4. TUTORIAL FEATURES
a. "HELP" COMMAND
b. DOCUMENTATION
OR-TIME
None
5. SEARCH STRATEGY
a. RANDOM
b. SEQUENTIAL
c. INDEXED SEQUENTIAL
A combination of a, b, and c

F. REPORT GENERATION:

1. LANGUAGE TYPE
a. STANDARD OUTPUT
b. SELECT AMONG
c. OWN CODE
No
Yes
No
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
b. DISPLAY OF GRAPHS
c. SPECIAL OUTPUTS
Yes
No
No
3. SPECIAL CAPABILITIES
a. SORTING
b. SEQUENCING
c. COUNTING
d. ARITHMETIC
Yes
Yes
Yes
No, but automatic total for arithmetic fields
4. SECURITY PROTECTION
a. TERMINAL
b. DATA BASE
c. RECORD
d. FILE
No
Yes
Yes
Yes

A. GENERAL DESCRIPTION

1. SYSTEM NAME
ORIGINATOR
RIGS
Vogelback Computing Center
Northwestern Univ.
Evanston, Ill. 60201
312-492-3741
- TELEPHONE
By arrangement
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
AT WHAT COST
b. FOR LEASE
AT WHAT COST
By arrangement
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
AT WHAT COST
b. DATA BASES
To non-profit or educational
organisations
Cost-reimbursable
Mostly bibliographies (Computer
science, physics, etc.),
journal abstracts for social
sciences, others
Yes
- c. TAKES CUSTOMER
DATA BASES
Yes
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION Sept. 1969
b. SIGNIFICANT
INSTALLATIONS
5. HISTORY OF SERVICE
a. SERVICE INITIATION
Sept., 1969 (demonstration of
prototype)
b. PRESENT USAGE
Heavy usage, over 50 data
bases in Chicago area.
- B. COMPUTER ENVIRONMENT
1. MAIN FRAME
CDC 6400
2. OPERATING SYSTEM
SCOPE 3.3 + in-house built
interactive front-end (on-line
subsystem)
3. SOURCE LANGUAGE
FORTRAN + COMPASS
4. TERMINAL TYPES
TTY-compatible; IMLAC graphics
terminal (15k baud, local
connection)
5. TRANSMISSION RATES
10, 15, 30 cps
6. RE-ENTRANT FOR
MULTIPLE USERS
No

C. FILE DEFINITION

1. USER DEFINABLE
Yes
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
Yes
- D. FILE "MAINTENANCE"
1. ALLOWS ON-LINE
a. CREATION
b. UPDATE
c. DELETION
d. EDITING
No on-line
capability
2. PREPROGRAMMED DATA
VALIDATION CHECKS
Yes (user
specified)
3. OPTIONAL ORDERING OF
ENTERED DATA
Yes
4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
Yes

E. QUERY

1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
AT ANY POINT
b. ENGLISH-LINE
PHRASING
c. SYSTEM-FORCED
DIALOGUE
Yes
Yes
No
2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
b. FULL TEXT INVERSION
c. STEERING PERMITTED
d. SYNONYMS
e. DISPLAY OF
RELATED TERMS
f. CHECKING TERM IN CON-
TROLLED VOCABULARY
No
Yes, user may
request in-
verted index,
or else full
text search
occurs on all
items
No
No
No
No

3. SEARCH SPECIFICATION

- a. MUST HAVE FIELDS
No
- b. MAY LIMIT FIELDS
Yes
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
Yes
- f. NESTING OF BOOLEAN
EXPRESSIONS
Yes
- g. PHRASE AND DISTANCE
SEARCHING
No distance
search
No
Yes
- h. NATURAL ENGLISH
i. RANGE SEARCHING
Yes
4. TUTORIAL FEATURES
a. "HELP" COMMAND
b. DOCUMENTATION
ON-LINE
Yes
Yes
5. SEARCH STRATEGY
a. RANDOM
Yes, for
specified
records or
subsets
Yes, for
full file
- b. SEQUENTIAL
c. INDEXED SEQUENTIAL
Yes

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT
b. SELECT AMONG
OPTIONS
c. OWN CODE
Yes
No
Yes
2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
b. DISPLAY OF GRAPHS
c. SPECIAL OUTPUTS
Yes
Yes
No
3. SPECIAL CAPABILITIES
a. SORTING
b. SEQUENCING
c. COUNTING
d. ARITHMETIC
Yes, batch
mode only
No
Yes
Yes

G. SECURITY PROTECTION

1. TERMINAL
2. DATA BASE
3. RECORD
4. FIELD
No
Yes
No
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME ORIGINATOR

SHOEBOX
MITRE Corp.
Bedford, Mass. 01730
Contact: Henry A. Bayard
617-271-2582

TELEPHONE

2. SOFTWARE AVAILABILITY

- a. FOR PURCHASE
AT WHAT COST
- b. FOR LEASE
AT WHAT COST

3. SERVICE AVAILABILITY

- a. SEARCH SERVICE
AT WHAT COST
- b. DATA BASES
- c. TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE

- a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS

5. HISTORY OF SERVICE

- a. SERVICE INITIATION
- b. PRESENT USAGE

B. COMPUTER ENVIRONMENT

1. MAIN FRAME
IBM 360 or 370 (SHOEBOX requires
186 K bytes of core)
2. OPERATING SYSTEM
OS/PCP, MFT, MVT
3. SOURCE LANGUAGE
TRTET (LISP derivative)
4. TERMINAL TYPES
IBM 2260 alphanumeric display
5. TRANSMISSION RATES
2500 cps (in local
configuration)
6. RE-ENTRANT FOR
MULTIPLE USERS
Yes (Up to 8 concurrent users)

3. SEARCH SPECIFICATION:

- a. "TEST NAME FIELDS
b. "MAX LIMIT FIELDS

- c. BOOLEAN AND
d. BOOLEAN OR
e. BOOLEAN NOT
f. NESTING OF BOOLEAN
g. PHRASE AND DISTANCE
SEARCHING
h. NATURAL ENGLISH
i. RANGE SEARCHING

4. TUTORIAL FEATURES

- a. "HELP" COMMAND
b. DOCUMENTATION
c. ON-LINE

5. SEARCH STRATEGY

- a. RANDOM
b. SEQUENTIAL
c. INDEXED SEQUENTIAL

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT
b. SELECT AMONG
OPTIONS
c. OWN CODE

2. "TDIA FLEXIBILITY

- a. OFF-LINE PRINTING
b. DISPLAY OF GRAPHS
c. SPECIAL OUTPUTS

3. SPECIAL CAPABILITIES

- a. SORTING
b. SEQUENCING
c. COUNTING
d. APATHETIC

G. SECURITY PROTECTION

1. TERMINAL
2. DATA BASE
3. RECORD
4. FILE

A. GENERAL DESCRIPTION

1. SYSTEM NAME
a. ORIGINATOR
SOLAR
Washington State University
Pullman, Washington, 99163
b. TELEPHONE
509-335-3564
2. SOFTWARE AVAILABILITY
a. FOR PURCHASE
Yes
b. AT WHAT COST
Not established
c. FOR LEASE
No
d. AT WHAT COST
No
3. SERVICE AVAILABILITY
a. SEARCH SERVICE
Yes
b. AT WHAT COST
\$500 annual subscription plus
costs per demand searches
subset of CABC plus local
literatures
c. TAKES CUSTOMER
No
d. DATA BASES
4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
Since 1971
b. SIGNIFICANT
None yet
c. INSTALLATIONS
5. HISTORY OF SERVICE
a. SERVICE INITIATION
Since 1971 for internal use
Only
b. PRESENT USAGE
Very infrequent, about ten
times per month
- B. COMPUTER ENVIRONMENT
1. MAIN FRAME
IBM 360/67 operating as a 65
2. OPERATING SYSTEM
OS MVT
3. SOURCE LANGUAGE
PL/1 plus assembly
4. TERMINAL TYPES
Any tty compatible with IBM
1050, and 2741
5. TRANSMISSION RATES
10, 14.7 and 15 cps
6. RE-ENTRANT FOR
Yes
MULTIPLE USERS

C. FILE DEFINITION

1. USER DEFINABLE
No
2. VARIABLE LENGTH TEXT
Yes
3. REPEATED FIELDS
No

D. FILE MAINTENANCE

1. ALLOWS ON-LINE
No
2. CREATION
No
3. UPDATE
No
4. DELETION
No
5. EDITING
No

2. PREPROGRAMMED DATA
Validation checks
Yes

3. OPTIONAL ORDERING OF
ENTERED DATA
No

4. AUTOMATIC OR
MACHINE-AIDED
CONTENT INDEXING
Yes, in batch-
mode only

E. QUERY

1. USER-SYSTEM INTERACTION
a. MULTIPLE OPTIONS
Yes
b. AT ANY POINT
Yes
c. ENGLISH-LIKE
No
d. PHRASING
No
e. SYSTEM-FORCED
DIALOGUE

2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY
Yes, special
vocabulary for
use in the CABC
data base
b. FULL TEXT INVERSION
Yes
c. STEMMING PERMITTED
Yes
d. SYNONYMS
Yes
e. DISPLAY OF
RELATED TERMS
Yes, separate
dictionary used
on-line in
browse mode

- f. CHECKING TERM IN CON-
TROLLED VOCABULARY
No

3. SEARCH SPECIFICATION

- a. MUST NAME FIELDS
Yes
- b. MAY LIMIT FIELDS
Yes
- c. BOOLEAN AND
Yes
- d. BOOLEAN OR
Yes
- e. BOOLEAN NOT
Yes
- f. NESTING OF BOOLEAN
EXPRESSIONS
Yes
- g. PHRASE AND DISTANCE
SEARCHING
No
- h. NATURAL ENGLISH
Yes
- i. RANGE SEARCHING
No

4. TUTORIAL FEATURES
a. "HELP" COMMAND
Yes
b. DOCUMENTATION
ON-LINE
No

5. SEARCH STRATEGY
a. RANDOM
Yes
b. SEQUENTIAL
No
c. INDEXED SEQUENTIAL
No

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT
Yes
b. SELECT AMONG
OPTIONS
Yes
c. OWN CODE
No

2. MEDIA FLEXIBILITY
a. OFF-LINE PRINTING
Yes
b. DISPLAY OF GRAPHS
No
c. SPECIAL OUTPUTS
No

3. SPECIAL CAPABILITIES
a. SORTING
No
b. SEQUENCING
No
c. COUNTING
No
d. ARITHMETIC
No

G. SECURITY PROTECTION

1. TERMINAL
No
2. DATA BASE
No
3. RECORD
No
4. FIELD
No

A. GENERAL DESCRIPTION

1. SYSTEM NAME:
ORIGINATOR

TELEPHONE

2. SOFTWARE AVAILABILITY

a. FOR PURCHASE
AT WHAT COST

b. FOR LEASE
AT WHAT COST

3. SERVICE AVAILABILITY

a. SEARCH SERVICE
AT WHAT COST

b. DATA BASES
c. TAKES CUSTOMER
DATA BASES

4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION
b. SIGNIFICANT
INSTALLATIONS

5. HISTORY OF SERVICE:

a. SERVICE INITIATION

b. PRESENT USAGE

B. COMPUTER ENVIRONMENT

1. MAIN FRAME

2. OPERATING SYSTEM

3. SOURCE LANGUAGE

4. TERMINAL TYPES

5. TRANSMISSION RATES

6. RE-ENTRANT FOR
MULTIPLE USERS

SPICES II
Institute for Communication
Research
Stanford Univ.
Stanford, Ca. 94305
415-321-2300, X2755

By arrangement

Yes
Based on resources used +
\$3.50/connect hour

Yes

NA

Fall, 1972

People are still learning how
to use it. There have been
many outside inquiries.

IBM 360/67

ORVYL under OS/VT-II

PL360

Primarily IBM 2741. Other
types can be supported.

10, 15 cps

Yes

C. FILE DEFINITION

1. USER DEFINABLE

Yes

2. VARIABLE LENGTH TEXT

Yes

3. REPEATED FIELDS

Yes

D. FILE MAINTENANCE

1. ALLOWS ON-LINE

Yes

a. CREATION

Overnight

b. UPDATE

Overnight

c. DELETION

Yes

d. EDITING

Yes

2. PREPROGRAMMED DATA

Yes

VALIDATION CHECKS

Yes

3. OPTIONAL ORDERING OF

ENTERED DATA

Yes

4. AUTOMATIC OR

MACHINE-AIDED

No

CONTENT INDEXING

E. QUERY

1. USER-SYSTEM INTERACTION

Yes

a. MULTIPLE OPTIONS

Yes

b. AT ANY POINT

Yes

c. ENGLISH-LINE

Yes

PHRASING

Yes

d. SYSTEM-FORCED

No

DIALOGUE

Yes

2. CONTENT SEARCHING

Yes, when

user-defined

Yes, on

user-designated

files

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

3. SEARCH SPECIFICATION

a. TEXT NAME FIELDS

No

b. KEY LIMIT FIELDS

Yes

c. BOOLEAN AND

Yes

d. BOOLEAN OR

Yes

e. BOOLEAN NOT

Yes

f. MIXING OF BOOLEAN

Yes

g. EXPRESSIONS

Yes

h. PHRASE AND DISTANCE

No

i. NATURAL ENGLISH

No

j. RANGE SEARCHING

Yes

4. TUTORIAL FEATURES

Yes

a. "HELP" COMMAND

Yes

b. DOCUMENTATION

Yes

c. ON-LINE

Yes

5. SEARCH STRATEGY

Yes

a. RANDOM

No

b. SEQUENTIAL

No

c. INDEXED SEQUENTIAL

No

F. REPORT GENERATION

1. LANGUAGE TYPE

Yes

a. STANDARD OUTPUT

Yes

b. SELECT AMONG

Yes

c. OWN CODE

No

2. MEDIA FLEXIBILITY

Yes

a. OFF-LINE PRINTING

Yes

b. DISPLAY OF GRAPHS

Yes

c. SPECIAL OUTPUTS

No

3. SPECIAL CAPABILITIES

a. SORTING

Yes

b. SEQUENCING

No

c. COUNTING

Yes

d. ARITHMETIC

No

G. SECURITY PROTECTION

1. TERMINAL

Yes

2. DATA BASE

Yes

3. RECORD

Yes

4. FIELD

Yes

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME	STAIRS	1. USER DEFINABLE	Yes	a. MUST HAVE FIELDS	No
ORIGINATOR	IBM Corporation Data Processing Division 1133 Westchester Ave. White Plains, N.Y. 10604	2. VARIABLE LENGTH TEXT	Yes	b. MAY LIMIT FIELDS	Yes
TELEPHONE	Local representative	3. REPEATED FIELDS	No	c. BOOLEAN AND	Yes
				d. BOOLEAN OR	Yes
				e. MIXING OF BOOLEAN EXPRESSIONS	Yes
				f. PHRASE AND DISTANCE SEARCHING	Yes
				g. NATURAL ENGLISH	No
				h. RANGE SEARCHING	Yes (in formatted fields)
2. SOFTWARE AVAILABILITY	No	1. ALLOWS ON-LINE	No	4. TUTORIAL FEATURES	Yes
a. FOR PURCHASE	Yes	a. CREATION	Yes (marked for deletion during batch update)	a. "HELP" COMMAND	Yes (under menu and EXPLAIN)
b. AT WHAT COST	\$500.00 per month	b. UPDATE	No	b. DOCUMENTATION	Yes
c. AT WHAT COST	NA	c. DELETION	No	c. ON-LINE	Yes
3. SERVICE AVAILABILITY	NA	d. EDITING	Yes, merge records into file, but not fields within record	7. SEARCH STRATEGY	Yes
a. SEARCH SERVICE	NA			a. RANDOM	Yes
b. AT WHAT COST	NA	2. PREPROGRAMMED DATA VALIDATION CHECKS	No	b. SEQUENTIAL	Yes
c. DATA BASES	NA			c. INDEXED SEQUENTIAL	Yes
d. TAKES CUSTOMER DATA BASES	NA	3. OPTIONAL ORDERING OF ENTERED DATA	Yes, merge records into file, but not fields within record	F. REPORT GENERATION	
4. HISTORY OF SOFTWARE	NA			1. LANGUAGE TYPE	Yes
a. FIRST INSTALLATION	July, 1972	4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING	No	a. STANDARD OUTPUT	Yes
b. SIGNIFICANT INSTALLATIONS	Not available			b. SELECT AMONG OPTIONS	Yes
				c. OWN CODE	Yes
5. HISTORY OF SERVICE	NA	F. QUERY		2. MEDIA FLEXIBILITY	Yes
a. SERVICE INITIATION	NA	1. USER-SYSTEM INTERACTION		a. OFF-LINE PRINTING	No
b. PRESENT USAGE	NA	a. MULTIPLE OPTIONS	Yes	b. DISPLAY OF GRAPHS	No
		b. AT ANY POINT	Yes	c. SPECIAL OUTPUTS	Yes
6. COMPUTER ENVIRONMENT		c. ENGLISH-LIKE PHRASING	Yes	3. SPECIAL CAPABILITIES	Yes
1. MAIN FRAME	IBM 360, 370 Series	c. SYSTEM-FORCED DIALOGUE	No	a. SORTING	Yes
2. OPERATING SYSTEM	OS/VT or VT (with CICS)			b. SEQUENCING	Yes
3. SOURCE LANGUAGE	Assembly, with some PL/1	2. CONTENT SEARCHING		c. COUNTING	No
4. TERMINAL TYPES	IBM 2741, 2260, 2265	a. CONTROLLED VOCABULARY	No	d. ARITHMETIC	No
5. TRANSMISSION RATES	15, 120 or 240 cps	b. FULL TEXT INVERSION	Yes	G. SECURITY PROTECTION	
6. RE-ENTRANT FOR MULTIPLE USERS	Yes	c. STOPPING PERMITTED	Yes	1. TERMINAL	Yes
		d. SYNONYMS	Yes	2. DATA BASE	Yes
		e. DISPLAY OF RELATED TERMS	No	3. RECORD	Yes
		f. CHECKING TERM IN CONTROLLED VOCABULARY	NA	4. FIELD	Yes

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME	SYSTEM 2000 (TM req.)	1. USER DEFINABLE	Yes	a. "LIST NAME FIELDS	Yes
1. ORIGINATOR	MRI Systems Corp. P.O. Box 9968 Austin, Tx. 78766 512-258-5171	2. VARIABLE LENGTH TEXT	Yes	b. "DAY LIMIT FIELDS	--
TELEPHONE		3. REPEATED FIELDS	Yes	c. BOOLEAN AND	Yes
				d. BOOLEAN OR	Yes
				e. BOOLEAN NOT	Yes
				f. EXPRESSIONS OF BOOLEAN	Yes
				g. PHRASE AND DISTANCE	No
				h. NATURAL ENGLISH	Yes
				i. RANGE SEARCHING	Yes
2. SOFTWARE AVAILABILITY	Yes	1. ALLOWS ON-LINE	Yes	4. TUTORIAL FEATURES	No
a. FOR PURCHASE	\$25,000 (minimum package)	a. CREATION	Yes	a. "HELP" COMMAND	No
b. AT WHAT COST	Yes	b. UPDATE	Yes	b. DOCUMENTATION	No
c. FOR LEASE	\$740 or \$960/mo. with option to buy (minimum package)	c. DELETION	Yes	c. ON-LINE	No
d. AT WHAT COST	buy (minimum package)	d. EDITING	Yes	5. SEARCH STRATEGY	No
3. SERVICE AVAILABILITY	Yes	2. PREPROGRAMMED DATA	Yes	a. "RANDOM"	Yes (inverted files)
a. SEARCH SERVICE	Arrange with data center	VALIDATION CHECKS	Yes	b. SEQUENTIAL	Yes
b. AT WHAT COST	None	3. OPTIONAL ORDERING OF	Yes	c. INDEXED SEQUENTIAL	No
c. TAKES CUSTOMER	Yes, with help from MRI and data centers	ENTERED DATA			
d. DATA BASES		4. AUTOMATIC OR	No		
e. DATA BASES		MACHINE-AIDED	No		
f. DATA BASES		CONTENT INDEXING	No		
4. HISTORY OF SOFTWARE	July, 1970				
a. FIRST INSTALLATION	Control Data data center, St. Paul Insurance Co. (IBM version), INFOWIT				
b. SIGNIFICANT					
c. INSTALLATIONS					
5. HISTORY OF SERVICE	July, 1970				
a. SERVICE INITIATION	Approx. 200 users.				
b. PRESENT USAGE	(3 versions exist; corresponding data on separate lines)				
B. COMPUTER ENVIRONMENT					
1. MAIN FRAME	IBM 360, 370 UNIVAC 1100 series CDC 6000 and CYBER 70 series	1. USER-SYSTEM INTERACTION	No	1. LANGUAGE TYPE	Yes
2. OPERATING SYSTEM	OS/MVT, MFT, TSO, VS/1 EXEC 8, CSTS SCOPL, KRONOS	a. MULTIPLE OPTIONS	Yes	a. STANDARD OUTPUT	Yes
3. SOURCE LANGUAGE	FORTRAN + Assembler	b. ENGLISH-LIKE	No	b. SELECT AMONG	Yes
4. TERMINAL TYPES	TTY 33, 35, IBM 2741, 2260	c. SYSTEM-FORCED	Yes	c. OWN CODE	Yes (FORTRAN, COBOL)
5. TRANSMISSION PAGES	10, 15, 120, 240 cps	d. DIALOGUE	No	2. MEDIA FLEXIBILITY	Yes
6. RE-ENTRANT FOR MULTIPLE USERS	Only IBM version			a. OFF-LINE PRINTING	Yes
				b. DISPLAY OF GRAPHICS	Yes
				c. SPECIAL OUTPUTS	No
				3. SPECIAL CAPABILITIES	Yes
				a. SORTING	Yes
				b. SOUTHCING	Yes
				c. COUNTING	Yes
				d. ARITHMETIC	Yes
				C. SECURITY PROTECTION	Yes
				1. TERMINAL	Yes
				2. DATA BASE	Yes (IBM only)
				3. RECORD	Yes
				4. FIELD	Yes

A. GENERAL DESCRIPTION

1. SYSTEM NAME
TICON (Timeshared Information Control System)
Advanced Computer Systems, Inc.
3131 S. Dixie Dr.
Dayton, Ohio 45439
513-294-0586

2. SOFTWARE AVAILABILITY
a. FOR PURCHASE Yes
AT WHAT COST Basic system is \$50 k.
b. FOR LEASE Yes
AT WHAT COST By arrangement

3. SERVICE AVAILABILITY NA
a. SEARCH SERVICE
AT WHAT COST
b. DATA BASES
c. TAKES CUSTOMER DATA BASES

4. HISTORY OF SOFTWARE
a. FIRST INSTALLATION Available and operational, but none installed yet.
b. SIGNIFICANT INSTALLATIONS

5. HISTORY OF SERVICE
a. SERVICE INITIATION NA
b. PRESENT USAGE

B. COMPUTER ENVIRONMENT

1. MAIN FRAME IBM 360, 370

2. OPERATING SYSTEM OS

3. SOURCE LANGUAGE Assembler

4. TERMINAL TYPES CRT, TTY, any IBM or GRAPHIC supported terminal.

5. TRANSMISSION RATES 80 cps, 10 cps

6. RE-ENTRANT FOR MULTIPLE USERS Yes

C. FILE DEFINITION:

1. USER DEFINABLE Yes

2. VARIABLE LENGTH TEXT Yes

3. REPEATED FIELDS Yes

D. FILE "MAINTENANCE"

1. ALLOWS ON-LINE
a. CREATION No
b. UPDATE Yes (optional with arithmetic data only)

c. DELETION No
d. EDITING Yes

2. PREPROGRAMMED DATA VALIDATION CHECKS Yes

3. OPTIONAL ORDERING OF ENTERED DATA Yes

4. AUTOMATIC OR MACHINE-AIDED CONTENT INDEXING Yes

E. QUERY

1. USER-SYSTEM INTERACTION:
a. "MULTIPLE OPTIONS AT ANY POINT" Yes
b. ENGLISH-LINE PHRASING Yes
c. SYSTEM-FORCED DIALOGUE No

2. CONTENT SEARCHING
a. CONTROLLED VOCABULARY No
b. FULL TEXT INVERSION Yes
c. STEMMING PERMITTED Yes
d. SYNONYMS No
e. DISPLAY OF RELATED TERMS No
f. CHECKING TERM IN CONTROLLED VOCABULARY Yes

3. SEARCH SPECIFICATION
a. "HIT" NAME FIELDS Yes
b. "HIT" LIMIT FIELDS Yes
c. BOOLEAN AND Yes
d. BOOLEAN OR Yes
e. BOOLEAN NOT Yes
f. MEETING OF BOOLEAN EXPRESSIONS Yes
g. PHRASE AND DISTANCE SEARCHING Yes
h. NATURAL ENGLISH Yes
i. RANGE SEARCHING Yes

4. "TUTORIAL" FEATURES
a. "HELP" COMMAND No
b. DOCUMENTATION ON-LINE No

5. SEARCH STRATEGY
a. RANDOM Inverted file for each word, searching via indices
b. SEQUENTIAL Yes
c. INDEXED SEQUENTIAL Yes

F. REPORT GENERATION

1. LANGUAGE TYPE
a. STANDARD OUTPUT Yes
b. SELECT AMONG OPTIONS Yes
c. OWN CODE Yes

2. "MEDIA" FLEXIBILITY
a. OFF-LINE PRINTING Yes
b. DISPLAY OF GRAPHS No
c. SPECIAL OUTPUTS No

3. SPECIAL CAPABILITIES
a. SORTING Yes
b. SEQUENCING No
c. COUNTING Yes
d. ARITHMETIC Yes

G. SECURITY PROTECTION

1. TERMINAL Yes
2. DATA BASE Yes
3. RECORD Yes
4. FIELD Yes

A. GENERAL DESCRIPTION		C. FILE DEFINITION		3. SEARCH SPECIFICATION	
1. SYSTEM NAME	UNIDATA	1. USER DEFINABLE	Yes	a. "UST NAME FIELDS	Yes
ORIGINATOR	United Computing Systems	2. VARIABLE LENGTH TEXT	Yes	b. "AY LIMIT FIELDS	--
TELEPHONE	3130 Broadway	3. REPEATED FIELDS	Yes	c. BOOLEAN AND	Yes
	Kansas City, Mo. 64106			d. BOOLEAN OR	Yes
	816-753-4500			e. BOOLEAN NOT	No
				f. NESTING OF BOOLEAN	Yes
2. SOFTWARE AVAILABILITY	Yes	D. FILE MAINTENANCE		g. EXPRESSIONS	Yes
a. FOR PURCHASE	By arrangement	1. ALLOWS ON-LINE		h. PHRASE AND DISTANCE	No
b. FOR LEASE	Yes	a. CREATION	Yes	i. NATURAL ENGLISH	No
c. AT WHAT COST	By arrangement	b. UPDATE	Yes	j. RANGE SEARCHING	Yes
3. SERVICE AVAILABILITY	Yes	c. DELETION	Yes	4. TUTORIAL FEATURES	None
a. SEARCH SERVICE	Variable, ave. \$25-\$35/connect	d. EDITING	Yes	a. "HELP" COMMAND	
b. DATA BASES	hour	2. PREPROGRAMMED DATA	Yes	b. DOCUMENTATION	ON-LINE
c. TAKES CUSTOMER	None	VALIDATION CHECKS		5. SEARCH STRATEGY	Yes
DATA BASES	Yes	3. OPTIONAL ORDERING OF	Yes	a. RANDOM	No
4. HISTORY OF SOFTWARE	Fall 1969	ENTERED DATA		b. SEQUENTIAL	No
a. FIRST INSTALLATION	Only UCF	4. AUTOMATIC OR	Yes	c. INDEXED SEQUENTIAL	No
b. SIGNIFICANT		CONTENT INDEXING		F. REPORT GENERATION	
5. HISTORY OF SERVICE	Fall 1969	E. QUERY		1. LANGUAGE TYPE	Yes
a. SERVICE INITIATION	Data not available	1. USER-SYSTEM INTERACTION		a. STANDARD OUTPUT	Yes
b. PRESENT USAGE		a. "MULTIPLE OPTIONS	Yes	b. SELECT AMONG	Yes
B. COMPUTER ENVIRONMENT		b. AT ANY POINT	Yes	c. OWN CODE	Yes
1. "MAIN FRAME	CDC 6000 series	b. ENGLISH-LINE	Yes	2. MEDIA FLEXIBILITY	Yes
2. OPERATING SYSTEM	MAX (in-house) or KRONOS (CDC)	c. PHRASING	Limited	a. OFF-LINE PRINTING	Yes
3. SOURCE LANGUAGE	FORTRAN, COBOL	c. SYSTEM-FORCED	None	b. DISPLAY OF GRAPHS	Yes
4. TERMINAL TYPES	All low-speed terminals; remote batch CDC 700 user terminal compatible. Also CRT devices.	d. DISPLAY OF		c. SPECIAL OUTPUTS	Yes, mag tape.
5. TRANSMISSION RATE	10-30 cps, 2400-9600 baud	e. RELATED TERMS		3. SPECIAL CAPABILITIES	Yes
6. RE-ENTRANT FOR	Yes	f. CHECKING TERM IN CON-		a. SORTING	No
MULTIPLE USERS		TROLLED VOCABULARY		b. SEQUENCING	No
				c. COUNTING	Yes
				d. ARITHMETIC	Yes
				G. SECURITY PROTECTION	
				1. TERMINAL	Yes
				2. DATA BASE	Yes
				3. RECORD	No
				4. FIELD	No

5. GLOSSARY OF COMMON DATA BASES

APA - American Psychological Association has created a data base containing the past four years' Psychological Abstracts.

COMPENDEX - Computerized Engineering Index, issued monthly by Engineering Index, Inc., is the computer-readable version of the printed publication, Engineering Index Monthly, which contains references spanning all engineering disciplines. These references are taken from professional and trade journals, publications of engineering organizations, papers from conferences and symposiums, books, and other documents.

CA-C - Chemical Abstracts Condensate issued by Chemical Abstracts Service is the computer searchable complement to the printed publication, Chemical Abstracts (CA), which covers the full range of chemistry, referencing 250,000 articles per year.

CA-Condensates is issued weekly; the content corresponds to an issue of CA. The tape version, CA-Condensates, precedes the corresponding printed issue of CA by several weeks due to the time required to print, bind, and distribute CA printed issues.

The abstracts in CA and CA-Condensates are grouped into five categories: Biochemistry, Organic Chemistry, Macromolecular Chemistry, Applied Chemistry and Chemical Engineering, and Physical and Analytical Chemistry. The first two groupings are published as an odd numbered issue one week, and the last three groupings are published as an even numbered issue the following week. Searches may be limited to odd or even numbered issues if desired.

CAIN - A data base distributed by the National Agricultural Library, it covers literature from all over the world concerned with agriculture in a broad sense. Ten per cent of the coverage consists of monographs; the remaining 90% consists of journal articles. The 90% comes from a review of 1,200 journals.

CT - Chemical Titles, also issued by Chemical Abstracts Service, contains journal references to approximately 4,500 articles per issue appearing in 650 important U. S. and non-U. S. chemical and engineering journals. Titles that appear in CT represent over 65% of the total abstracts that later appear in Chemical Abstracts. Chemical Titles offers journal references to articles approximately 70 days before their abstracts are published in Chemical Abstracts. In many cases titles appear in Chemical Titles before the journal containing the article is published. Thus Chemical Titles is valuable as an alerting service.

CBAC - Chemical-Biological Activities, also issued by Chemical Abstracts Services, provides up-to-date coverage of published work concerned with the interaction of organic compounds (drugs, pesticides, etc.) with biological systems.

Also covered are metabolism studies and studies of in-vitro chemical reactions of biochemical interest. Nearly 700 journals are monitored. CBAC is a consolidated source of information in the chemical-biological field, and especially appeals to scientists involved in biochemical and physiological research.

The tape version of CBAC corresponds to the Chemical-Biological Activities hard-copy version; however, tape issues are usually available two-four weeks ahead of the printed copy. Each issue contains 500-600 digests.

ENVIRON - Environmental Information Retrieval On-line is a modified version of RECON operating at Environmental Protection Agency (EPA). It services the EPA and maintains a data base of 8 separate files as follows:

- (1) Selected literature reference on noise abatement and control.
- (2) Selected literature on industrial waste.
- (3) Data and abstracts on on-going EPA contracts and grants' research effort.
- (4) Data and abstracts on final reports of EPA contracts and grants research effort.
- (5) Information on oil spills.
- (6) Information on lists of potentially toxic chemicals.
- (7) Information on water quality monitoring stations and parameters.
- (8) Information on administrative records.

ERIC - Educational Resources Information Center is a nation-wide information network for acquiring, selecting, abstracting, indexing, storing, retrieving, and disseminating the most significant and timely educational research reports and projects. It is a project of the U. S. Office of Education, and produces two data bases, RIE (Research in Education) and CIJE (Current Index to Journals in Education).

IAA - See STAR

INSPEC - A data base distributed by England's Institution of Electrical Engineers, it covers the fields of physics, electrical and electronic engineering, computers, and control engineering. Seventy-five percent of the coverage comes from a review of about 2,000 journals. The other 25% are reports, monographs, patents, etc.

MARC II - is a data base containing bibliographic citations prepared by the Library of Congress.

NTIS - is a data base issued by National Technical Information Service of the U. S. Department of Commerce. It consists of unclassified government reports resulting from government-sponsored research. The reports are compiled in a publication now called Government Reports Announcements (GRA). GRA is available in machine readable form from the Department of Commerce.

The tapes contain standard bibliographic information such as author and title, as well as abstracts, descriptor terms, and information on how to order copies. The information consists mainly of science, engineering and mathematics, but also includes reports on behavioral and social sciences.

JURIS - Justice Retrieval and Inquiry System is a data base developed by the U. S. Department of Justice. It is designed to serve lawyers for the Federal government in their research process. The data base contains selected legal periodicals and reported cases, advisory opinions, supreme court briefs, solicitor general's memoranda, selected appellate briefs, selected legal memoranda, legal correspondence, legal memoranda on points of authority, agency general counsel specialized briefs and memoranda, etc.

MEDLINE - MEDLARS On-line data base is a special subset of the MEDLARS file, developed by the National Library of Medicine through their screening and analysis of the world's biomedical literature. MEDLINE covers over 1,100 biomedical journals from 1970 to present, whereas MEDLARS covers 2,400 biomedical journals from 1961 to present. The current file contains 400,000 records, and approximately 12,000 new records are added monthly.

PANDEX - The PANDEX tape contains current index to scientific and technical literatures appearing in more than 2400 journals. The bibliographic information includes the title of the articles, name(s) of the author(s), name of the journal, Coden abbreviation, issue number, page number, and subject heading taken from a PANDEX thesaurus. PANDEX is produced by CCM Information Corporation, New York.

SPIN (Searchable Physics Information Notices) - a data base distributed monthly by the American Institute of Physics, it covers over one-half of the world's physics and astronomy literature. Over 30,000 items are included every year from a journal coverage of 70 journals.

STAR - Scientific And Technical Aerospace Reports and International Aerospace Abstracts - are two data bases issued by NASA. They contain reports and journal articles that the NASA scientific and technical information program has collected. These data bases represent significant findings of Government, industrial, and academic researchers throughout the world on matters of interest to the aerospace community.

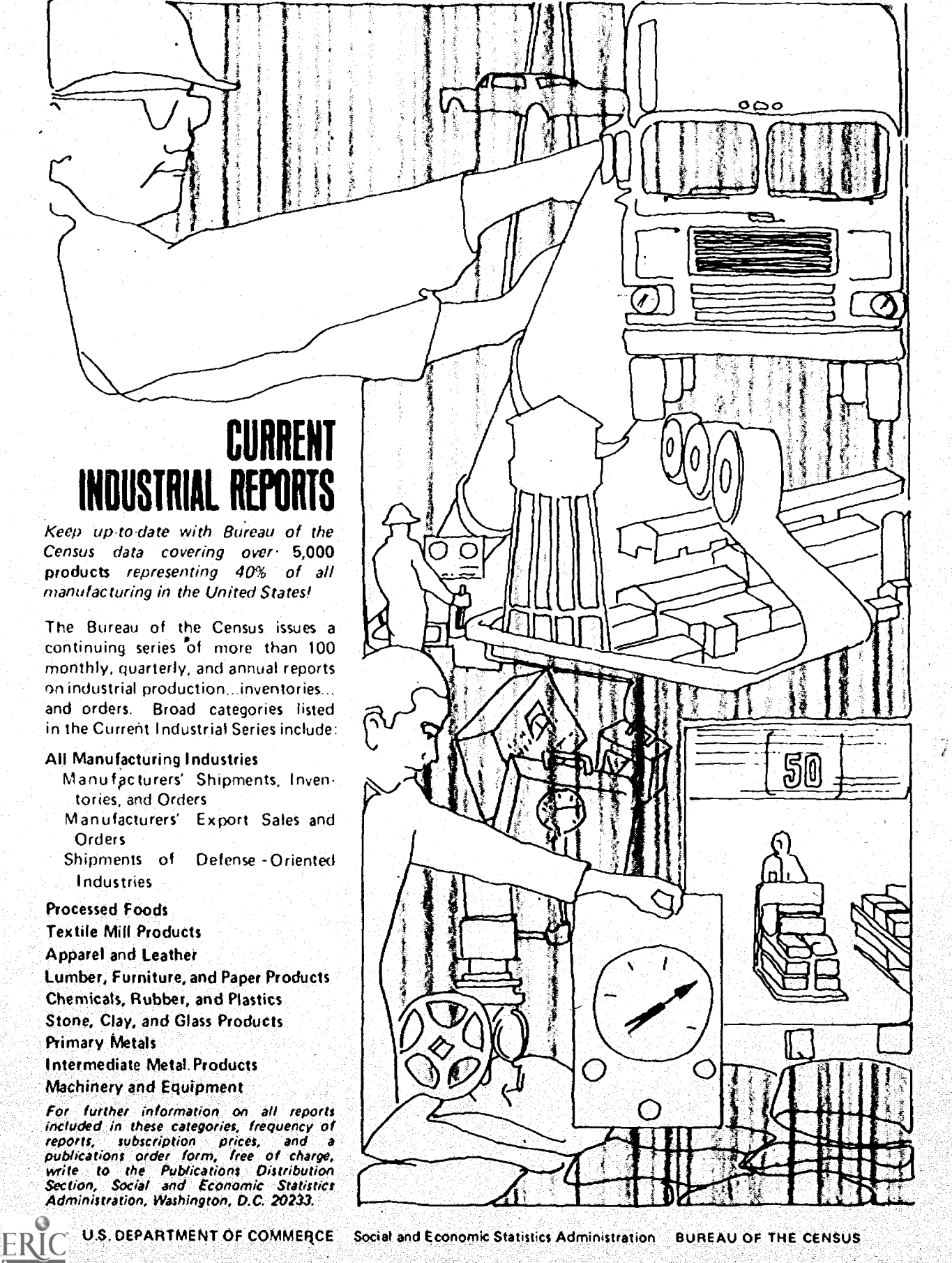
TOXICON - A data base collected by the Toxicology Information Program, National Library of Medicine of the Department of Health, Education and Welfare. It contains bibliographic citations of literature primarily in the area of toxicology, pharmacology and environmental health. The citations include all the principal components of a literature reference; namely, author, title, journal, journal coden, volume, issue, pagination and year. Most references are annotated with index terms, an abstract or both. Where possible and appropriate, Chemical Abstracts Service Registry Numbers are made part of the annotation.

6. BIBLIOGRAPHY

There have been a number of surveys and other works done in recent years which are similar in intent to ours but not identical in scope or form. A selective bibliography is now presented.

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- [9] Seiden, H. R., "A Comparative Analysis of Interactive Storage and Retrieval Systems with Implications for BCN Design," System Development Corporation Technical Memorandum 4421, Jan. 1970.
- [10] Walker, D. E. (editor), Interactive Bibliographic Search: The User/Computer Interface, AFIPS Press, 1971.

U.S. DEPT. OF COMM. BIBLIOGRAPHIC DATA SHEET		1. PUBLICATION OR REPORT NO. NBS TN-819	2. Gov't Accession No.	3. Recipient's Accession No.
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				6. Performing Organization Code
7. AUTHOR(S) Dennis W. Fife, Kirk Rankin, Elizabeth Fong, Justin C. Walker, Beatrice A. Marron				8. Performing Organization
9. PERFORMING ORGANIZATION NAME AND ADDRESS NATIONAL BUREAU OF STANDARDS DEPARTMENT OF COMMERCE WASHINGTON, D.C. 20231				10. Project/Task/Work Unit No. 640
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				14. Sponsoring Agency Code
15. SUPPLEMENTARY NOTES				
16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.) This report constitutes a reference to technical features and operational status of interactive information systems, i.e. those providing a 'conversational' usage mode to a 'non-programmer' through a data terminal device. It is aimed at the ADP service manager, for his use in the state-of-the-art assessments preparatory to a detailed system selection process. It contains an index that describes 46 systems in terms of a list of over 50 technical features plus descriptive, identification, and background information. In addition, there are aids and examples contributing to the intended use of the index.				
17. KEY WORDS (Alphabetical order, separated by semicolons) Bibliographic systems; computer programs; computer systems; data base; data management; information retrieval; information services; interactive system; query language; software selection; text processing.				
18. AVAILABILITY STATEMENT ☒ UNLIMITED. ☐ FOR OFFICIAL DISTRIBUTION. DO NOT RELEASE TO NTIS.		19. SECURITY CLASS (THIS REPORT) UNCLASSIFIED	21. NO. OF PAGES 73	
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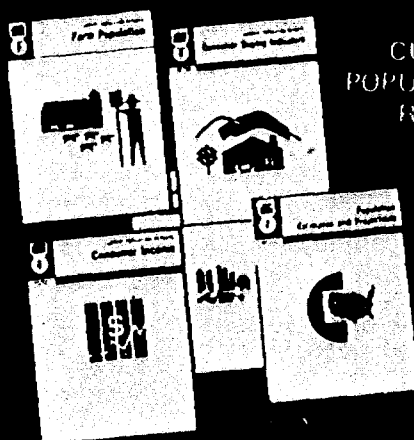
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